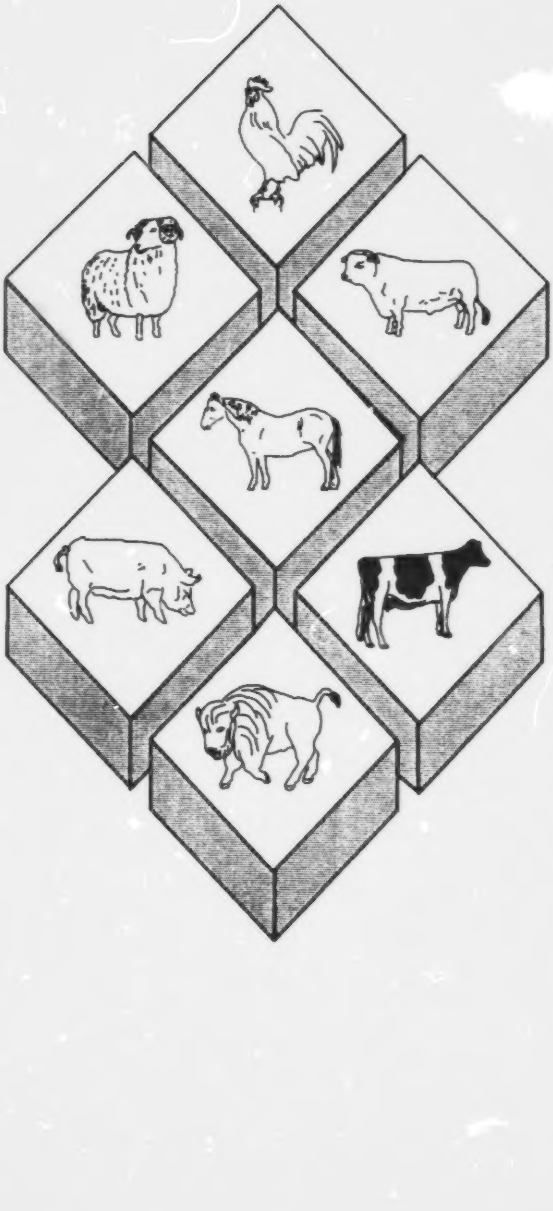
1987-88
ANNUAL
REPORT



ANIMAL
INDUSTRY
DIVISION

Alberta
AGRICULTURE

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ANIMAL INDUSTRY DIVISION

The animal industry division is made up of seven branches: beef cattle and sheep, dairy production, dairy processing, horse industry, pork industry, poultry, and regulatory services and feeder associations. As a result of a realignment put in practise in 1987-88 and finalized in the budget process for 1988-89, the administration of feeder associations was transferred to the horse industry branch.

The division also administered the Alberta crow benefit offset program which has the objective of offsetting the distortion in feed grain prices in Alberta created by the payment of the federal Crow benefit to the railroads.

The activities of the division, as noted in the individual branch reports, included extending technical information to producers and agri-business involved in the production and marketing of meat and dairy producing animals and poultry. The division administered a number of acts and regulations involved in livestock and dairy production. This legislation was amended to conform with industry changes and needs.

The division remained involved in the safety net programs for livestock producers and contributed considerable support and resource to the national tripartite red meat stabilization program administered under centralized program support.

BEEF CATTLE AND SHEEP BRANCH

Industry Overview

Beef Cattle

The rebuilding phase of the beef cycle, which began in 1986, continued at an increased pace in 1987. The provincial breeding herd of cows and heifers at January 1, 1988 was estimated at 1.510 million, an increase of 3.2% from 1987. An increase of 15% in heifers retained for breeding was the major contributing factor. At the same time, there was an increase of 6.9% in the number of current year calves at January 1, 1988. This reflected an increase in the 1988 calf crop as well as a decrease in the number of feeder calves sold for finishing out of the province in 1987.

The herd rebuilding resulted from a growing optimism among beef producers, encouraged by both very low feed costs and record high average prices for finished cattle. The net price paid for feed barley, after adjustment for the Crow Benefit Offset payment ranged from $50.00 to $60.00 per tonne in the later months of the year. The resulting feed costs per hundred weight of feed lot gain, as low as $20.00 to $25.00, allowed feed lot operators in turn to pay record high prices for feeder cattle and calves.

Weighted average weekly prices for finished steers peaked at over $90.00 per hundred weight live in May, and averaged $83.36 for the calendar year. This represented an increase of 10% over the previous year.

The improved fed beef prices resulted from a reduced output of beef in both Canada and the United States in 1987. Total Canadian slaughter was down by 8%, largely as a result of reduced slaughter of females. Output of beef from Alberta, on the other hand was up by 2% as a result of a reduction of sales of feeder cattle to eastern Canada, and an influx of feeder cattle from Saskatchewan and British Columbia, attracted by lower feeding costs.

Profit margins for feed lot operators were favorable in the early months of the year but fell to the point where the participants in the tripartite red meat stabilization program received payments in the fourth quarter of 1988.

Heavy feeder steer prices reached a high of over $100.00 per hundred weight in September as feed grain prices continued to fall in the face of world surpluses and a reasonable crop on the prairies. The weighted average price for the year for heavy feeders was $92.65 per hundred weight, 15% above the 1987 price.

Prices for feeder steer calves also reached their highest point in September at over $130.00 per hundred weight. Individual lots of lighter weight calves reached prices as high as $150.00. Feeder steer calves weighing from 500 to 600 pounds averaged $114.41 for the year, 22% over those for 1987.

The weather continued dry in the north eastern part of the province and in parts of the Peace River district, but timely rainfall allowed for abundant hay crops in the central areas. As a result there were a few local shortages of feed supplies but in general both feed grains and hay stocks were in good supply. Higher than normal rainfall in the month of August contributed to excellent fall pastures in those parts of the province, already noted, which were not affected by the continuing drought.

Sheep

1987 was the best year on record for finished lamb prices in Alberta. The highest prices of the year were recorded in May at over $100.00 per hundred weight live. Prices remained well above the 1986 for much of 1987 but fell to 1986 levels by the end of the year. Weighted average prices for finished lambs in Alberta averaged $92.26 per hundred weight, 10% above those for 1986.

The attractive prices encouraged growing optimism among sheep producers in 1987. As a result producers increased their flocks during the year. Total sheep and lamb numbers in Alberta at January 1, 1988 was estimated at 132,000, an increase of 2.3% from the revised numbers for the same date in 1987.

Imports of fresh and chilled lamb from Australia and New Zealand continued to cause concern to sheep producers in 1987.

Nutrition

Weather conditions, although extremely variable, generally were a positive factor for the livestock industry in 1987-88. Lack of spring moisture which resulted in reduced early pasture growth, and 1st cut hay yields, was a concern in many areas. In these areas beef producers grazed hay fields after pastures ran out in late June and July. This lead to a higher than normal incidence of pasture bloat and pulmonary emphysema. Above average precipitation throughout the province in July and August rapidly improved pastures and second cut hay yields. Regrowth in cereal crops improved the quality of straw in many regions. Mild and dry fall weather permitted on early harvest and extended the grazing season. As a result forage supplies for cattle were abundant in most areas.

An exceptionally mild winter reduced feed costs for beef producers, with a surplus of forage being evident at the end of the winter feeding period. The abundance of feed and mild climatic conditions has resulted in a successful calving season. Some reports of larger than normal calves have been received.

Second cut legumes, of exceptionally good quality, were available for feeding during the winter. This type of forage was considered responsible for the increased incidence of bloat in feeder calves in central and northern areas. Due to the low price, feed grains were fed to cattle in increasing amounts. This is generally beneficial although some problems with mineral imbalances has occurred. The incidence of "downer cows" in exotic crossbred herds continued to be a concern. Calcium and/or magnesium deficiencies were commonly responsible.

The dairy industry has benefited from the abundant supply of good quality forage and cheap feed grain. Nutritional problems encountered were mostly due to mismanagement rather than a lack of quality feed resources. The poultry and swine industries continue to be well served by the feed industry. Over capacity in the feed industry continues to exert pressure on manufacturing margins, for the benefit of the livestock feeder.

Continued profitability in the sheep industry lead to an increased producer interest in starting or expanding the enterprise. Nutritional problems related to inexperience were common.

Regional Summaries

Region 1

The relatively mild winter of 1987 resulted in cows in good shape at calving and lowered calving losses. The mild winter of 1987 also resulted in higher than normal spring feed inventories. This resulted in lowered feed costs during the winter of 1987. Since feed represents the single largest cost of the annual costs of a cow-calf operation, the lowered feed prices reduced costs substantially. This, coupled with strong calf and cull cow prices, resulted in good returns to the cow-calf producer and a fair amount of optimism in the industry. Although this optimism has not triggered substantial increases in cow numbers, bred cow prices have increased substantially.

Most of the expansion within the cow-calf industry has occurred in existing herds. Although there has been a fair amount of interest from traditional grain producers, little of the expansion has occurred from them since money is in short supply and they are cautious about borrowing the necessary capital.

Although the Crow Benefit Offset Program is a major benefit to the feeding industry, most of this benefit was transferred to the cow-calf industry through increased feeder replacement prices and to the packing industry through increased supplies of fat cattle at lowered relative prices.

The amount paid under the program was decreased during the year. This reduction was more than made up for by an adjustment in the price that feeders paid for silage. During the previous feeding year, feeders had purchase silage based on the Canadian Wheat Board initial price of barley prior to the announcement of the Feed Grain Market Adjustment Program. The purchase of the 1987 silage crop reflected the barley price under the program.

Because of the higher feeder replacement costs and the lowered feed costs it became more economical to feed cattle to heavier slaughter weights with some increase in the number grading A2, A3 and A4. Canadian packers attempted to alter this trend by applying discounts to heavier and fatter cattle. For the most part, this was unsuccessful since the American packers were willing to accept these cattle at no discount. This situation resulted in increased numbers of cattle being shipped to the United States and the Canadian packers having to reduce their discounts to remain competitive.

Region 2

The past year again had very erratic weather with a very dry spring, a wet cool summer and a dry fall and winter. Good yields of feed combined with the mild winter resulted in a high carry over of feed. However the spring of 1988 was very dry and the carry over feed was necessary to supply feed until pastures were ready for grazing.

The lack of snow over the last several years has resulted in a problem with a lack of surface water sources and more important, lower water tables.

The markets for all classes of cattle were almost a copy of the previous year except that feed cattle were higher priced. When combined with the A1-A2 price differentials levied by packers, feeding margins were tight in the latter portion of the year. The announcement that Cargill will build a packing plant in High River brought mixed reactions. On one hand, Cargill has indicated that they will forward price, provide financing and pay premiums on various grades. All these features are positive to producers. However, because of the high capacity that this plant will have, some of the less efficient plants in the region will likely close resulting in less competition bidding in the market place.

The major extension theme in the region was to present alternatives in agricultural production. As the economics of farming was not particularly good overall, and livestock were one of the few viable enterprises, they were the emphasis in the regional extension program.

Region 3

Calf prices in the fall of 1987 were strong and there was an abundance of roughage and feed grain. The fall was open so cattle were not put on feed as early as normal. This, along with a mild winter helped cow-calf producers achieve good returns with minimal outlay of capital.

Feedlot producers, on the other hand, had the task of filling their lots with feeder cattle bought at record prices. Strong slaughter prices in the spring of 1988 helped to decrease losses but, in most cases, it was a loss rather than a positive return. Health problems were minimal during the winter so there was an opportunity to make a profit it the cattle were bought right.

Breeding bull sales were very strong with all breeds selling well and with a rejuvenation of the British breeds. It appears that more cattle producers are looking at the maternal side which could mean an increase in cow numbers over the next few years. Bull selection is still mainly by conformation, however, so the industry has a long way to go in this respect.

The Red Meat Stabilization Program for cow-calf production is looking more favorable, mainly due to the change in the phase-in period for late entrants into the program. Producers feel we have one to three good years left until calf prices soften significantly, which means it is best to join the program now to be in a position to receive 100% of payouts that could be expected in those years.

All segments of the beef industry are relatively optimistic and feel that with sound management profits can be made. The one down side was the impending drought situation in the spring of 1988.

Many of the activities carried out relative to beef cattle in the region centered around a long term plan based on the concept of the Beef Herd Management System. Many of the districts have formed small groups which meet regularly to discuss topics set out by the groups. Our staff guide and direct them, as well as resource their activities, but the groups set the agenda. Along with the Beef Herd Management groups, the region has set out a plan to determine the needs and views of individual and collective beef producers. About 7,000 surveys were sent to beef producers in the region asking questions on various aspects of beef production. The results of the survey will act as a base to direct beef extension activities in the region for the next three to five years.

Region 4

The dry summer limited hay and pasture production. Some areas received up to five inches of rain in August. However in much of the region it was too little too late. The result was a higher percentage of open cows and lighter weight calves in the fall. The cattle from the Rannach community pasture were sent home at the end of August to conserve the grass. Dusty conditions at weaning increased pneumonia problems in feeder calves. Soil and water conservation, and pasture management needs more attention regionally. Most producers were able to gather sufficient winter feed supplies, many be utilizing barley and straw rations. Low grain prices encouraged this option. A relatively mild winter resulted in carry over feed and cows in better than average condition in some areas of the region. There were generally fewer calving problems than normal in the spring of 1988. The mild and dry spring reduced the incidence of scours and pneumonia in baby calves. However, it will or should delay turn out of cattle on pasture.

There was an increased demand for feeder calves last fall. The market peaked in September, which is traditionally a lower priced market. Sales of $1.30 to $1.40 per pound were common at this time and some sales went as high as $1.65 to $1.70 per pound. Part of the increased demand for feeder calves came from grain growers feeding cattle to market their grain. While this was a profitable market for the cow-calf producer, it did cause losses in the feedlot.

The bred cow and heifer market was quite strong during the winter with sales averaging around $1,000 per head. This indicates that herd rebuilding is still underway. Some districts report an increase of 10 to 25% in local herds. Many producers are holding back more than the usual amount of replacements, while some are buying heifers in the fall to background and breed on pasture to sell as replacements. The bull market was also strong with a average price of $2,000 and a top price of $6,000 on bulls at the Lloydminster sale. The Vermilion Livestock Co-op was reopened by the Nilsson Bros. of Clyde. This will provide some local competition to the Wainwright Auction Market.

There is some interest in fall calving in the Wandering River area as a means of minimizing losses due to black flies. A research project on fall calving has been approved for a producer at Plamondon. The beef herd management program is gaining momentum in the region. Three new beef clubs have started. One district has completed a beef survey and a number of others are interested in surveying their producers. There is some renewed interest in the beef ROP program and good interest in the central bull test at Lakeland College. The Crow Benefit Offset Program, combined with low grain prices, is widely used and has encouraged more cattle feeding in the region. High calf prices led to a decrease in preconditioning.

Region 5

Due to a dry 1987 spring, there was general concern regarding pasture and forage crops. Fortunately, continual August rains alleviated concerns. Pastures were in good to excellent condition throughout late summer and fall. Although most operators started winter feeding in early November, the open fall conditions allowed for grazing through to early January for some operators with abundant pasture. Winter conditions remained mild and relatively snow free such that there was lower than average utilization of hay and straw, leaving an abundant spring carry over.

Dry spring conditions in 1988 have generally reduced the incidence of scours. However, the usual high incidence of calving difficulty remains. Breeding cows and bulls were generally in good to excellent condition at the end of winter.

Cow-calf returns have been exceptional with fall calf prices reaching new highs. The national average market price of weaned calves was $1.20 per pound. Locally, 500 to 600 pound steer calf prices ranged from $1.15 to $1.35 throughout the fall period. The optimism continued in the industry as producers paid from $800 to $1,100 for bred cows and up to $1,300 for crossbred cows with calf at side. Low grain prices and a relatively low cattle population coupled with retention of heifers for breeding are favorable factors influencing calf prices. In general, the cow-calf industry remains prosperous. It is a time to reap the benefits, perhaps reduce the debt load and enjoy the good times.

The feedlot industry in the region continues as a small but important component in the industry. There are 20 to 30 small feedlots (500 to 5,000 head capacity) scattered throughout the region. They are injecting money and jobs into the local economy and are helping to utilize the excess feed grains in the area. Feedlot costs, excluding interest, ranged from 35 to 45 cents per pound of gain.

The region completed the third winter for a monthly newsletter that is sent to approximately 2,500 cattle and hog producers in the region. This year Region 3 cooperated in the newsletter for about 1,700 producers in that region. A major emphasis was placed on beef cattle reproduction throughout the region. Extension activities highlighted nutrition and its effect on conception, the costs of an extended calving season, bull evaluation and selection and other related topics. Beef surveys were conducted in two districts and two beef management clubs were active in the region. There was a high interest among cattle producers in building or replacing cattle handling facilities.

Region 6

Increasing interest in long term planning for beef cattle production in the region by cattlemen has increased demands on staff. The emphasis of the regional program was to shorten the calving period. To accomplish this a combination of seminars, informal kitchen meetings, and individual "project" approaches were used. There was a move away from the beef management club approach, which probably indicates a measure of the extent to which individual cattlemen have clarified their goals and course of action.

The first central bull test, followed by a successful sale, was completed at the Fairview College Bull Test Station. Fall cattle sales were held directly from two grazing reserves. Three more grazing reserves are currently installing scales so that they will also be able to host direct sales.

Three major regional seminars were held on beef production and marketing topics. Corral planning and construction assistance continues to be well used by producers. Good facilities are going up throughout the region.

The Peace River Lamb Association continues to provide a nonprofit lamb and wool marketing service to Alberta and British Columbia sheepmen, with its activities coordinated through the regional office. The association has initiated a producer backed insurance scheme for transit death losses.

Programs

Federal-Provincial Beef ROP Program

A major change in the Federal-Provincial Beef ROP Program occurred about November 1, 1987, when the Department assumed responsibility for processing producer data. An agreement with Agriculture Canada has provided the Department with computer hardware and software to handle this function. The change-over from Ag Canada required that the processing system be shut down for about three weeks to allow for the preparation of an Alberta data base, the installation of the new hardware and staff training. Data processing then began with a backlog of producer reports. What with minor "bugs" in the system and a new data entry clerk, it took some time to work through the accumulating reports. In spite of the slower-than-usual service, participants in the program seemed to be quite satisfied with the new system.

In March, 1988, new software was received which allows for much faster data entry. As a result, data processing should be carried out much more smoothly in the future.

Since the new hardware was installed, 119 herds have had records processed. A total of 8760 - 1987 weaning records were processed between Agriculture Canada and Alberta Agriculture. This amount of activity compares favorably with that of the previous two years.

The section was represented at the National Advisory Board for Beef Cattle Improvement in 1987. This Canada-wide group meets annually to discuss concerns and to make plans to further the impact of performance testing on the beef industry.

R.O.P. Weight Supervision Program

This program provides for the supervision of scales and weights taken for beef home test programs in the province. This is accomplished through both hired technicians and through reimbursement of Counties/Municipalities whose employees have provided supervision. About 27,000 head of cattle from 480 operations in 17 districts were weighed at a cost to the Department of nearly $30,000.

Cattle weighed under the weight supervision program will have performance calculations done: by the Federal-Provincial Beef ROP Program, by one of several industry (breed association) programs, or at home on one of a number of home microcomputer programs available (or by hand). In some cases, raw weights alone are used in the evaluation - if anything other than visual appraisal enters the selection process.

Bull Test Stations

Enthusiasm among Alberta beef producers for "central" bull test stations continues to grow as demonstrated by expanded facilities and increased numbers of bulls tested. 39 groups sponsored tests at various provincial locations from Raymond to Fairview. Some 4050 bulls passed through these tests in 1987-88. This again represents an increase in bulls tested of roughly 19% over the 1986-87 figures.

Department staff was involved with virtually all these stations in either supervision of weights, calculation and distribution of results or consultation in testing procedures or ration formulation.

Sales of station tested bulls this spring were generally very good though some may have suffered somewhat because of producer caution due to the dry spring conditions.

The Ellerslie Bull Test Station, operated by the Department since 1970 was closed in 1987 due to Government restraint policies. The University of Alberta undertook to run a bull test at Ellerslie, however, there was insufficient indication of producer interest in the time allotted to warrant opening the facility. The U of A plans to make the Ellerslie facility available to producers in the fall of 1988 if the interest justifies it.

The Alberta Beef Cattle Performance Awards

The first annual Alberta Beef Cattle Performance Awards were presented in 1987. Recipients were Hans Ulrich of Claresholm in the "purebred" category, and John Stewart-Smith of Cochrane in the "commercial" category. Both these producers were then nominated for the Canadian Beef Performance Awards Program. Mr. Ulrich was subsequently selected as a joint recipient of this award along with a producer from Manitoba.

The Alberta awards are to be presented annually with the 1988 winners to be honored in the fall of the year. Nominations are invited from the general public.

Reproductive Physiology

The major focus of this program area is to assist producers in achieving greater success in animal fertility. To this end an active program of extension seminars, farm visits, preparation of published materials, and demonstrations were carried out. A series of several bull evaluation workshops were conducted in cooperation with private practicing veterinarians. A basic research project on the effect of growth hormone on intensity of estrus behavior in dairy cows was initiated during the year.

Semen Evaluation Lab.

The major purpose of this laboratory is to assist the industry evaluate the quality of semen produced for artificial insemination.

The laboratory handled 727 samples of semen from various species during the fiscal year (Table 1).

Table 1

Number of Semen Samples Evaluated

Species	1987-88	1986-87	1985-86
Bison	1	-	-
Cattle	662	681	818
Deer	-	-	4
Dogs	-	-	-
Foxes	-	-	6
Sheep	45	3	-
Swine	8	11	33
Turkeys	11	-	38
Yak	-	-	1
Totals	727	695	900

The semen evaluation laboratory evaluated 5% more samples in 1987-88 than in the previous year. A goodly portion (87%) of these samples were submitted by the 1 boar, 3 bull and 1 ram semen producing businesses in Alberta. Bovine semen accounted for 78% of the samples.

Of the 727 samples submitted 184 were either from males suspected of producing questionable quality semen or were from stock deemed to have been stored improperly. Of these samples 79% were judged to be unacceptable. The remaining 543 samples were submitted for routine monitoring and 34% of the latter did not meet the standards prescribed by Alberta Agriculture.

The number of cattle semen samples received from different sources by the laboratory and judged substandard during the last three fiscal years are listed below (Table 2).

Table 2

Source of Semen	Number of Samples			Number Substandard		
	1987-8	1986-7	1985-6	1987-8	1986-7	1985-6
A.I. Studs	570	644	715	241	842	442
Alberta Agriculture	11	1	24	5	1	18
Embryo Transfer	1	1	3	0	1	3
Inseminating Businesses	27	15	25	20	9	22
Private breeders	18	4	40	17	3	30
Univ. of Alberta	23	-	-	-	-	-
Veterinarians	12	12	10	8	10	10
Total	662	677	817	291	466	542

The Alberta Agriculture guidelines for minimum quality of cattle semen produced in this province were first formulated in 1978. These guidelines were altered in 1987-88 in consultation with the 3 beef studs located in this province and a moderator from Agriculture Canada. The changes were made to better reflect the practices of the cattle semen producing industry in Alberta and in light of the research on semen quality versus fertility published since 1978. These new guidelines were explained to those attending the A.I. industry forum held in July, 1988.

Artificial Insemination

The Animal Breeding Section is responsible for administration of the Artificial Insemination of Domestic Animals Act and its related regulation. During 1987 the following licenses were issued:

Semen Producing Businesses: 1 swine
3 cattle
Inseminating Businesses: 47
Artificial Inseminating Technicians: 105
Semen Producing Technicians: 16

These numbers are largely unchanged from last year.

An A.I. industry forum was held to receive and discuss needs for changes to the A.I. regulation due to be rewritten. Approximately 50 industry representatives attended.

A.I. Data Program

This program pays $1.00 per record for the return of a the record of each insemination performed by a licensed A.I. technician. The purpose is to provide a data base of information respecting the insemination of cattle. During the 1987-88 fiscal year, 29,755 records were processed. About 7,100 of these records had been received in the 1986-87 fiscal year, but as a result of processing problems were processed and paid for in the current year.

Game Farming

Interest in game farming continued high during the year. In 1987, the number of licensed game farms increased from 55 to 70. At year end, about 20 to 25 other farms were in the process of developing facilities. The growth of the industry is slower than the level of interest would indicate because of the limited availability of breeding stock. Breeders have had to rely on animals imported from the USA and from the production of their own herds to increase the size of the provincial breeding herd. As of March 31, 1988 about 2,000 elk were on farms in Alberta.

Effective April 1, 1987 it became legal to sell velvet antlers from farm raised elk. The average price paid in 1987 was $120.00 per kg. Numerous buyers from Hong Kong and Korea visited Alberta and have tried to arrange long term contracts. Some preliminary discussions have been made toward setting up processing facilities here.

The first public auction sale of elk breeding stock in Alberta was held in 1987. Eight female elk calves averaged $3,975 and seven mature females averaged $5,300 at this sale. This price was somewhat higher than expected and reflected the interest and confidence of producers in game farming as an industry.

Interest in raising bison also continued in 1987. All available female breeding stock were used to expand herds. The major problem of finding enough females to satisfy the demand and enough male slaughter animals to fill the meat market continued. As of March 31, 1987, approximately 4000 females were being farmed in the province.

The most notable development in the bison industry of 1987 was that breeders have become convinced that bison females can have a calf every year if they are managed properly for the breeding season. In the past, they have been content with a calf about every other year. One major breeder, with 700 breeding females, increased his calf crop from 55% to 87% one year after beginning a systematic pasture rotation program. The same herd was pregnancy tested in the fall of 1987 at a 98% pregnancy rate. This knowledge is spreading rapidly to bison breeders and it is expected that the growth of the industry can accelerate as more calves become available for breeding stock. Profitability will also increase.

Interest in raising other exotic animals also increased. These include llama, wild boar, ostrich and others. At the moment very few animals of these species are actually being raised in Alberta but many people are interested in finding a breeding stock sources. There is no clear indication of the market potential for some of these animals and their long term impact on agriculture is uncertain at the moment.

Alberta Fish and Wildlife continued to administer the regulations governing game farming but Alberta Agriculture remained responsible for extension work. In addition to the normal volume of extension work, an uncounted number of interviews with interested parties were received by telephone. This activity accounted for in excess of 50% of the office time of the specialist providing service to the game farming industry. The calls were for various reasons but most were either inquiries about the status of the game farming regulations or specific requests for information about management of game or exotic species.

Warble Control Programs

Inspections of carcasses in Alberta packing plants in 1987 showed 1.5% infested with warbles in the period from March through May. This is similar to the infestation of less than 1% in 1986, and a continued indication of success in the program to control warbles in the province. The department provides grants to agricultural service boards to assist in their local programs to promote and enforce the warble control program under the authority of the Agricultural Pests Act. A grant of 60% of service board costs is provided in addition to grants to reimburse 100% of the service boards' costs for providing inspections for warble infested animals in the auction markets within their jurisdictions.

Table 3

Warble Control Program Costs

1987	1986	1985	1984	1983
$164,040	$156,443	$157,969	$161,159	$149,702

Livestock Production Improvement Program

Agricultural service boards are provided with grants covering 60% of the costs of programs and projects in their local jurisdiction which will assist livestock producers to improve production practices. The purpose of the program is to introduce producers to new technology and practices which are not yet in general use in the district so that they can assess the value on their own farms. In 1987 a number of the projects undertaken in conjunction with the beef herd management program were supported through the livestock production improvement program.

Table 4

Livestock Production Improvement Grants

1987	1986	1985	1984	1983
$43,491	$42,133	$56,086	$42,228	$43,730

Fair Assistance Program

The livestock fair assistance program which provided assistance to Alberta exhibitors with grants to cover a portion of travel costs to specified major shows outside of the province was discontinued in the 1987-88 year. In the years 1981 through 1986-87, from 245 to 304 exhibitors received grants totalling from $107,431 to $139,386.

Black Fly Abatement

The program to provide relief from black fly attack to cattle in the County of Athabasca and Improvement District #18(S) provided a grant to the County of Athabasca in the amount of $57,000 for the purpose of contracting the monitoring of the Athabasca River for black fly larvae, treating the river with the larvicide methoxychlor and monitoring impact on both black fly larvae and non-target species.

The first treatment was made in late May of 1987 but the federal pesticide directorate did not provide approval for a second experimental treatment in July. There was a contingency plan to use the alternative biological larvicide Bacillus Thuringensis 14 (BTH 14) but the numbers of larvae present in the river through July did not justify the cost of the experimental treatment.

The livestock pest specialist continued the monitoring of smaller tributaries to the Athabasca river and identified some streams which contained black fly larvae which might be contributing to the attack on livestock. Plans were put in place for a pilot project for treatment of two tributaries with the BTH 14 in 1988.

At the end of the fiscal year contingency plans were in place for increased activity to protect livestock with on farm treatment methods in the event that the methoxychlor treatment of the river might not be permitted in 1988. In addition there were also plans for a detailed survey of the area beef cattle producers to provide for an analysis of production problems on individual farms and the district in general. The purpose will be to assist producers to assess alternative production strategies which could provide improved income while reducing the impact of black flies on their herds.

Sheep R.O.P. Home Test Program

In the 1987-88 year processing of the sheep R.O.P. home test data was transferred from Airdrie to the Edmonton office. The information on the 1987 lamb crop was processed using the local "Sabre" software under contract. In the early winter of 1987-88 the newly revised federal-provincial home test sheep R.O.P. program was transferred from Ottawa to the Edmonton office together with hardware to allow for processing and offset funding to assist in covering costs. It is expected that the new program will allow for a continuation of the rapid turnaround for producers who have provided a prelisting of the flock information, with the additional possibility that estimated breeding values from the data base that will soon be available. Sixty-six flocks with 3509 lambs were enrolled in the federal-provincial program in 1987.

Table 5

Enrollment in Sheep R.O.P. Home Test

Breed	1987	1986	1985	1984	1983
Suffolk	2153	3339	2514	2079	1432
Hampshire	291	332	240	397	421
Cheviot	204	255	243	358	244
Rambioullet	235	388	487	253	139
Columbia	110	368	281	227	291
Dorset	162	122	196	172	173
Leicester	---	---	---	14	---
Corriedale	---	---	---	51	96
Finnish Landrace	13	69	---	---	281
Polypay	---	69	---	---	---
Romonov	25	22	---	---	---
Other Purebreds	---	---	36	---	47
Crossbreds	326	2446	146	349	404
Total	3509	7410	4143	3900	3528

* Data from 1987 records include only flocks which were recorded on the federal-provincial program which requires registered flock letters. Data from 1983-1986 included commercial flocks registered on the provincial micro-computer program which did not require registered flock letters. Commercial flocks may obtain registered commercial flock letters and it is expected that many will do so in 1988.

Alberta Ram Test Station and Hays Pasture Test

The central R.O.P. ram test at the Olds College campus had entries of 164 lambs from 24 flocks for the test concluded in June 1987. An additional 13 rams were entered in the wool breeds test and a further 22 lambs from 5 flocks were tested for performance under irrigated pasture conditions at the Hays pasture in southern Alberta.

The following table provides information on the numbers of contributors, sheep tested, gains, animals sold, average price and top price for the twelve years since the station started operations. Only lambs with gains above the station average and rigorously selected for soundness were included in the test station sale.

Table 6

1987 Ram Test Station Results

Breeders On Program		Sheep Tested	A.D.G. Suffolk (Rams)	Head Sold	Average Price (all (ram lambs)	Top Price
1975	12	85	.32 kg	45	$ 223	$ 525
1976	7	70	.36 kg	43	231	450
1877	14	165	.36 kg	53	244	500
1978	16	155	.42 kg	57	275	1050
1979	17	123	.49 kg	52	331	675
1980	17	101	.48 kg	44	323	520
1981	23	102	.48 kg	40	375	775
1982	28	115	.47 kg	49	387	1100
1983	38	173	.514 kg	61	332	750
1984	37	228	.550 kg	72	384	1500
1985	38	202	.532 kg	61	421	1350
1986	28	*238	.516 kg	51	416	950
1987	24	**190	.508 kg	64	558	2800

* Includes entries on Wool Test.

** Includes entries on Wool Test and entries on a pilot pasture test which is not yet an official part of the Test Station program.

The lambs on the pasture test represented four different breeds. Average daily gains on pasture ranged from 0.188 pounds to 0.413 pounds for the various groups. Because there were small numbers in each breed group the averages could not be considered representative of the breeds present. Evidence from other research has suggested that performance in a test station with a forage and grain diet will give as good an estimate of growth potential on pasture as a pasture test because of the difficulty of controlling variables in a pasture testing situation. For that reason, the pasture test will be discontinued in 1989.

Alberta Angora Goat Performance Test

Alberta angora goat producers entered 25 animals in the first station performance test for mohair production in the spring of 1988. The test is conducted at the Olds College campus at the site of the sheep R.O.P. test station. Results from the test will be available in the 1988-89 year.

Beef Herd Management Program

The beef herd management program was highlighted in 1987 by the production of a beef herd management home study guide and reference binder. The binder consists of a comprehensive collection of factsheets from a wide variety of sources. These provide both technical and practical information on all aspects of beef production, including breeding, genetics, reproduction, nutrition, health, housing and handling facilities, range and pasture management, marketing, and financial and business management. The binder also includes a management guide section which lists in brief the management activities required in the beef throughout the production year. Also included is a section for trouble shooting various common problems in the beef herd and a study guide to facilitate home study. The reference binder is sold for $35.00 through the Alberta Home Study system. By March 31, 1988 approximately 2700 have been sold. A system of review and revision to keep the reference binder up to date has been put in place.

The beef herd management program now has 20 beef herd management groups in the province. A very effective format to survey the herd management practices in a district was developed together with a computer program to analyze returns and provide individual producers with to help information to help in improving herd productivity. The survey has been conducted in ten districts. It is expected that over 2500 producers will have participated.

Feed Analysis Service

The objective of this program is to provide information on the nutrient quality of feedstuffs so that optimum levels of production can be achieved by producers. This is accomplished through the analysis of feeds for producers, extension staff and researchers. As such three categories of feedstuffs exist, (1) regular for paid submissions from producers, (2) demonstration for diagnostic and extension work by government staff and (3) research for special projects being conducted by university, federal and provincial government staff.

Total Samples Analysed

The total number of samples received for analyses was 12,864 (Table 7). This was a decline of 7.3% from 1986-87 receipts and was 7.7% below the 1979-87 average of 13,939. The largest portion of the decline came from the regular samples which dropped 24.9% from the previous year. Demonstration samples increased slightly (4.4%) while research samples declined 4.1%.

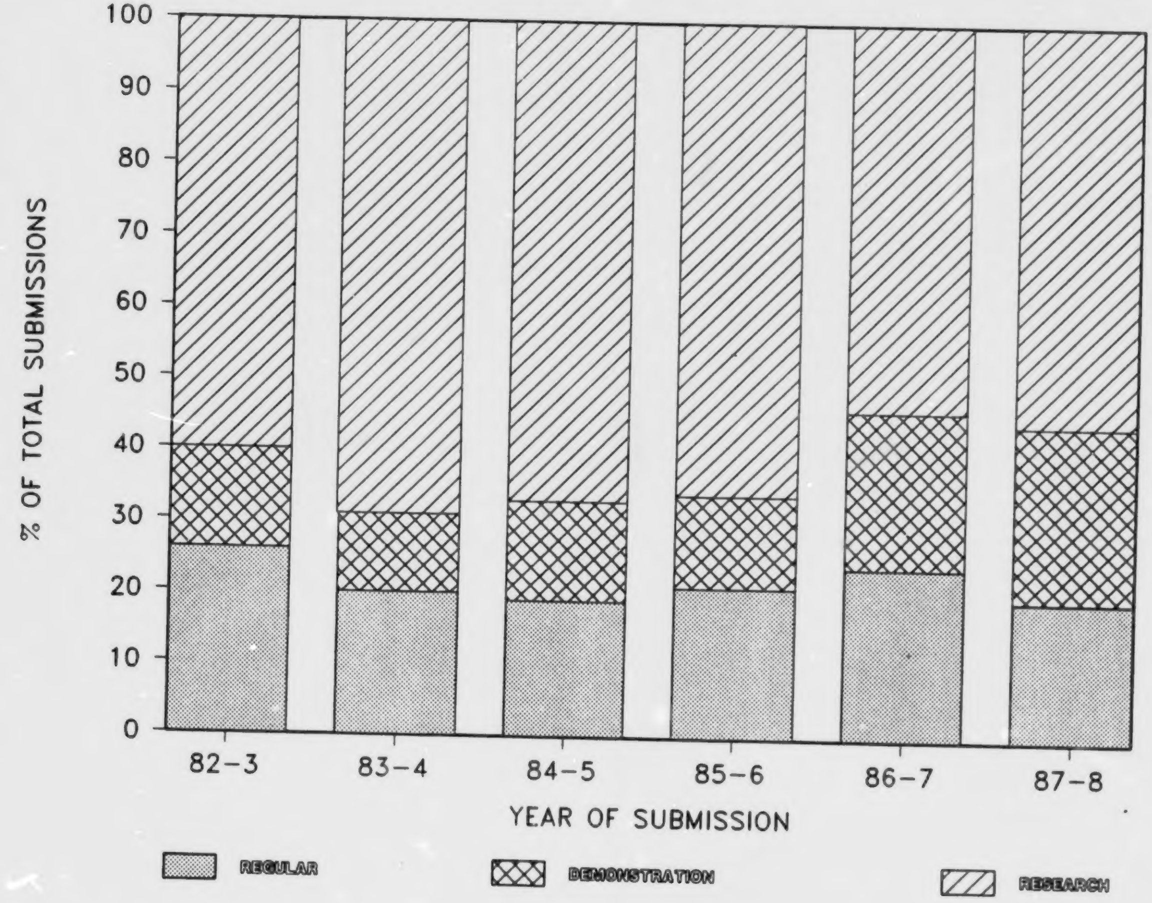
Regular samples were 19.6% of the total samples received (Graph 1). This is down from 24% in 1986-87 but not very different than the 1982-87 average of 22%. The proportion of demonstration and diagnostic samples continued to increase and were 24.8 % of total samples. Research samples were 55.6% of the total number of samples received.

Table 7

Comparison between the number of samples received for last three fiscal years and the average number received in 1979 to 1987 fiscal years

Period	Regular	Demonstration	Research	Total
1985-86	3,566	2,295	11,412	17,273
1986-87	3,360	3,055	7,456	13,871
1987-88	2,524	3,189	7,151	12,864
Ave 1979-87	3,686	2,482	7,770	13,939

GRAPH 1 FEED SUBMISSIONS DISTRIBUTION BY TYPE



The decline in regular submissions may be due a fee increase which occurred on August 1, 1987. It appears that the number of samples received by the private laboratories increased and is approximately 33-35,000 for a similar period. Feedback from the private sector indicates that a feed analysis may be playing a larger role in business management decisions and is an investment that producers see as worthwhile.

The source of research samples received was primarily Alberta Agriculture staff though projects from University of Alberta and Agriculture Canada continued to produce feed samples.

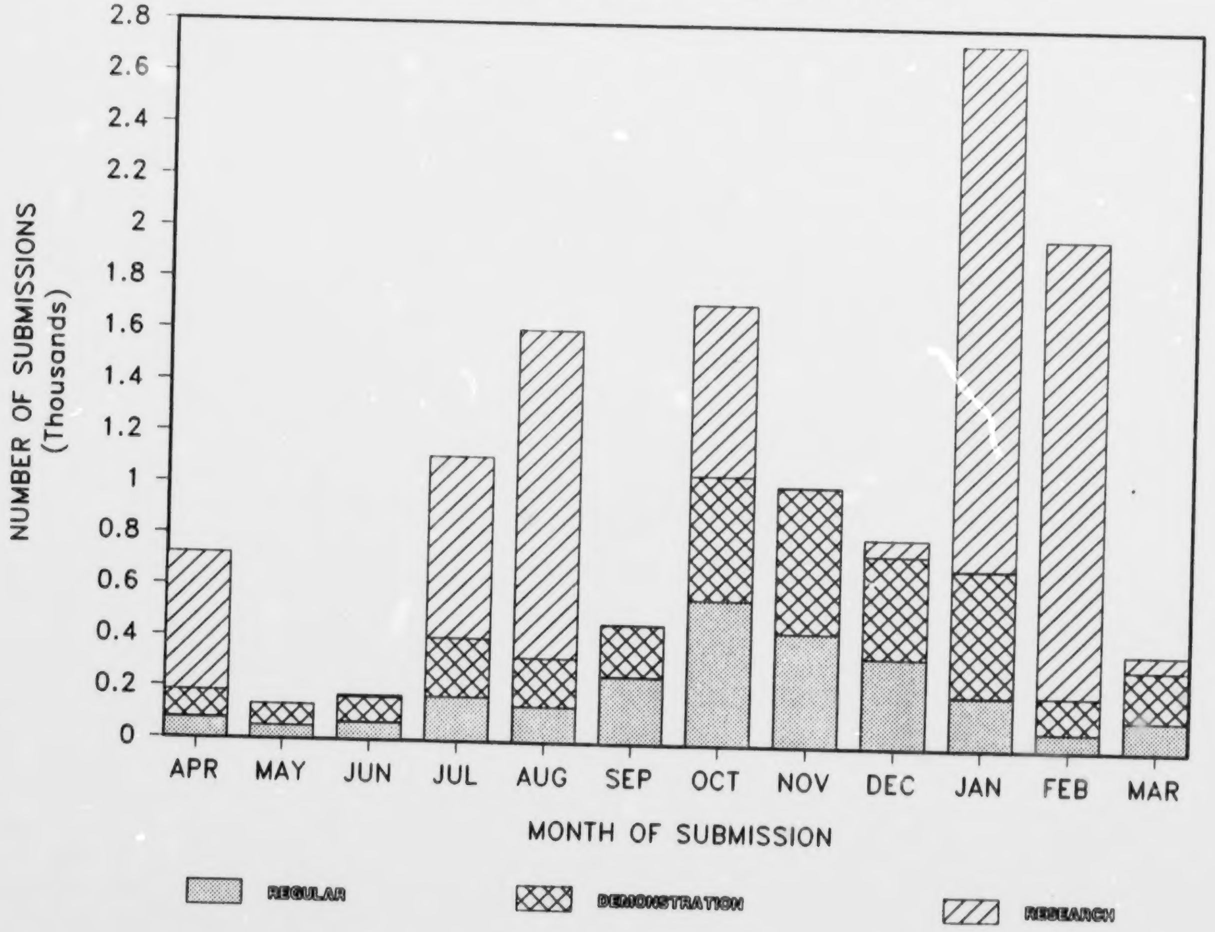
Demonstration and diagnostic samples continued to be of use to district, regional and provincial extension staff. This was a valuable service to producers unfamiliar with the benefits of feed analysis or those experiencing serious nutrition related production problems.

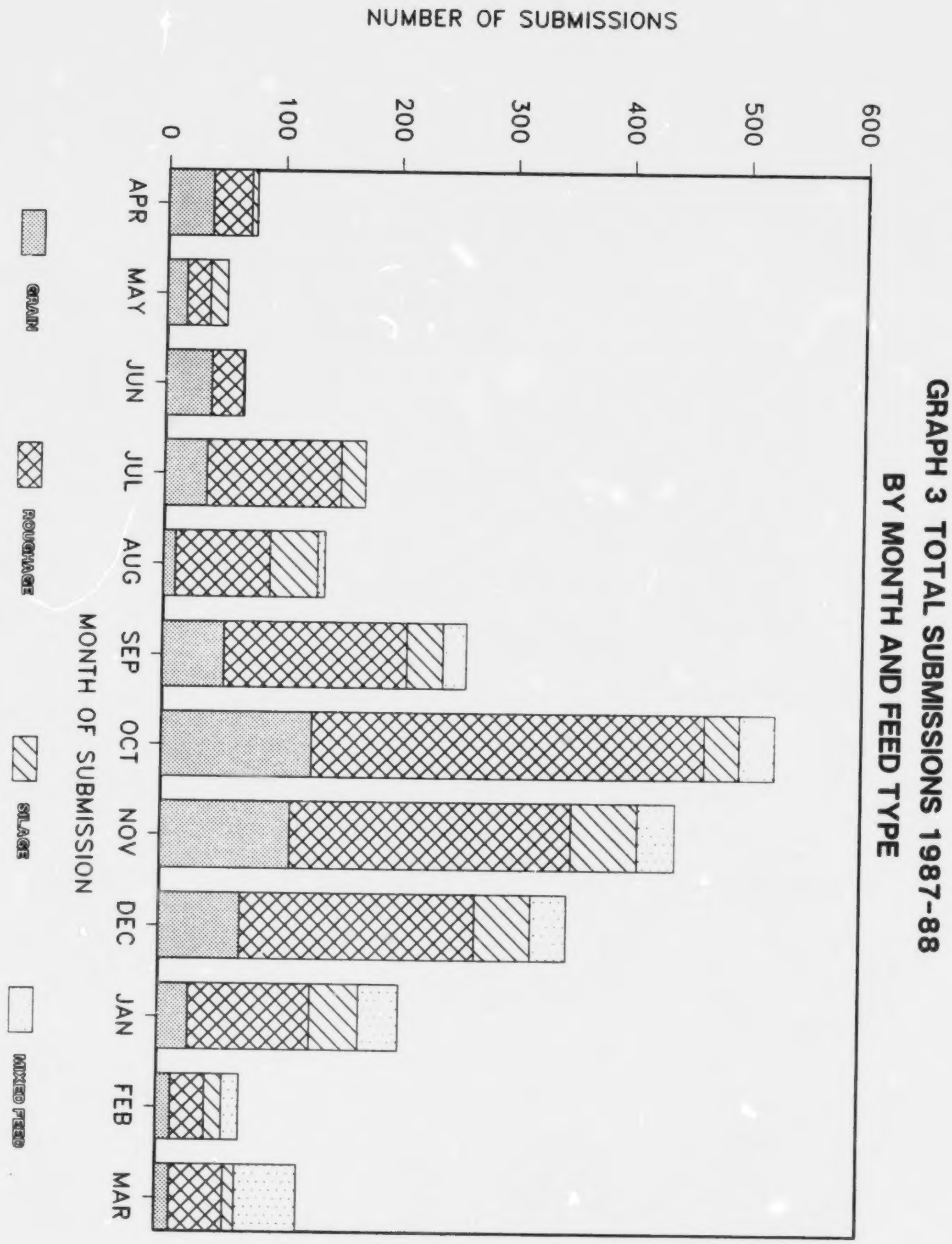
Frequency of Sample Submissions

The peak time for the number of regular samples received continues to coincide with the post-harvest, pre-feeding months (Graph 2). Sixty four percent of total regular samples were received in the months of September to December inclusive. During this same time period 52 % of total demonstration samples, and 10% of total research samples were received. The distribution of submissions of regular and demonstration samples was normal. Encouraging the submission of research samples in the non-fall months was an important factor in keeping turn around time at acceptable levels.

The distribution of the frequency of sample submissions by feed type (Graph 3) continued to be influenced by harvest season. The

GRAPH 2 DISTRIBUTION OF SAMPLES 1987-88
BY MONTH AND SAMPLE TYPE





GRAPH 3 TOTAL SUBMISSIONS 1987-88 BY MONTH AND FEED TYPE

total number of silage samples submitted was up from 316 in 1986-87 to 403 in the 1987-88 fiscal year. As a proportion of total samples this represented an increase of 9.4 to 16.0% for the silage samples. The category of mixed feeds was introduced on August 1 and 8.8% of total samples were in this category.

Types of Analysis Conducted

Table 8 indicates the analyses that were conducted on the three types of submissions. The regular package analyses for roughages included moisture, crude protein, calcium, phosphorus, acid detergent fiber, nitrates and pH (silages only). For the whole grains package calcium analysis was dropped because it is of no practical value. The whole grain package includes bushel weight, protein, moisture and phosphorus. The package for the new mixed feed category includes moisture, protein, calcium and phosphorus. Special analyses for prussic acid, carotene, crude fat, salt, ash, individual minerals, acid detergent insoluble nitrogen, neutral detergent fibre and crude fibre were available upon request.

The number of trace mineral analyses conducted was down from 1986-87 in absolute numbers (Table 9) and as a proportion of total samples submitted (Table 10) trace mineral analyses in 1987-88 were above the 5 year average. Nutritionists placed less emphasis on trace mineral analyses because the data base collected to date indicates that routine supplementation of copper, manganese and zinc is required. Also, the new fee schedule has increased the cost of trace mineral analyses. There was an increase in ADIN and NDF analyses of research samples.

The Near Infrared Spectroscopy (NIR) unit was used for routine fibre analyses on dry alfalfa and alfalfa grass mixtures. Upgrading this unit was initiated and it will be very useful in further research and regular analyses.

Feeding Program Recommendations

Feed analysis reports were individually evaluated by the Laboratory Nutritionist and general recommendations or nutritional quality were made. In 1987-99, 1,207 regular (Table 11) and 773 demonstration (Table 12) reports were printed and evaluated. This represents a decrease of 23.8% for regular and 2.5% for demonstration reports compared to last year.

Requests for the development of feeding programs were made by submittors of 99 of the regular and 4 of the demonstration reports. These requests amounted to 8.2 and 0.5% of reports respectively. While the request for feeding programs is down from last year, these figures do not represent the total amount of work completed on a feed reports. Requests for feeding programs often come in after the analyses have been received. Any requests not evident at the time of sample submission would not have been recorded in Table 11 or 12. Also, nutrition section staff have been training and encouraging district staff to become more involved in the development of feeding programs for clients. This encouragement may be a reason for fewer requests being received by nutrition section staff.

Table 8 - Distribution Of Chemical Analyses Of Alberta Feedstuffs By Sample Submission - 1987-88 Fiscal Year

Analysis	Regular	%	Demonstration	%	Research	%	Total Number Of Analyses	%
Package (regular)*	2,524	61.4	3,189	44.5	7,151	28.3	12,864	35.2
Carotene	55	1.3	69	1.0	-	0.0	124	0.3
Fat	13	0.3	57	0.8	287	1.1	357	1.0
Selenium	485	11.8	670	9.4	65	0.3	1,220	3.3
Salt	4	0.1	41	0.6	-	0.0	45	0.1
Ash	23	0.6	23	0.3	1,137	4.5	1,183	3.2
Copper	184	4.5	586	8.2	1,224	4.8	1,994	5.5
Manganese	139	3.4	521	7.3	1,222	4.8	1,882	5.2
Zinc	183	4.5	581	8.1	858	3.4	1,622	4.4
Iron	15	0.4	162	2.3	553	2.2	730	2.0
Magnesium	119	2.9	347	4.8	209	0.8	675	1.8
Potassium	92	2.2	311	4.3	1,187	4.7	1,590	4.4
Sodium	1	0.1	104	1.5	144	0.6	249	0.7
Aluminum	0	0.0	8	0.1	-	0.0	8	0.0
Molybdenum	2	0.1	71	1.0	144	0.6	217	0.6
Sulphur	79	1.9	226	3.2	1,074	4.2	1,379	3.8
A.D.I.N.	35	0.9	74	1.0	379	1.5	488	1.3
Prussic Acid	5	0.1	10	0.1	-	0.0	15	0.0
Boron	0	0.0	19	0.3	910	3.6	929	2.5
Nickel	0	0.0	-	0.0	-	0.0	0	0.0
Cobalt	4	0.1	9	0.1	-	0.0	13	0.0
N.D.F.	0	0.0	26	0.4	839	3.3	865	2.4
Lignin	0	0.0	15	0.2	784	3.1	799	2.2
Chloride	0	0.0	5	0.1	432	1.7	437	1.2
Calcium	52	1.3	-	0.0	1,140	4.5	1,192	3.3
Phosphorus	62	1.5	-	0.0	1,050	4.2	1,112	3.0
Crude Fat	17	0.4	-	0.0	-	0.0	17	0.1
Crude Fibre	14	0.3	29	0.4	-	0.0	43	0.1
NO_3	2	0.1	-	0.0	939	3.7	941	2.6
A.D.F.	1	0.0	-	0.0	891	3.5	892	2.4
Vanadium	-	0.0	3	0.0	-	0.0	3	0.0
pH	-	0.0	7	0.1	-	0.0	7	0.0
Si	-	0.0	3	0.0	-	0.0	3	0.0
Moisture	-	0.0	-	0.0	1,592	6.3	1,592	4.4
Protein	-	0.0	-	0.0	1,090	4.3	1,090	3.0
Total	4,110		7,166		25,301		36,577	

* Package analysis includes moisture, protein, calcium, phosphorus, acid detergent fibre and nitrates on roughages and silages.

Acid determination (pH) is done for silages.

Grain sample analysis includes; bushel weight, protein, phosphorus, with calcium being estimated with little variation expected.

Table 9 - The Number and Types of Chemical Analyses on Alberta Feedstuffs over the Past Five Fiscal Years

Analysis	1983-84	1984-85	1985-86	1986-87	1987-88	Average
Package (regular)*	20,395	19,226	17,273	13,871	12,864	16,726
Carotene	380	273	242	213	124	233
Fat	144	166	347	211	357	271
Selenium	1,863	1,687	1,758	2,342	1,220	1,627
Salt	78	106	674	54	45	183
Ash	2,118	1,022	2,132	155	1,183	1,090
Copper	1,804	1,587	3,087	2,668	1,994	1,866
Manganese	1,802	1,456	2,139	2,230	1,882	1,553
Zinc	1,805	1,601	1,879	2,582	1,662	1,610
Iron	649	707	2,378	869	730	924
Magnesium	1,408	1,173	2,264	1,507	675	1,294
Potassium	1,144	1,121	1,346	1,750	1,590	1,091
Sodium	325	556	1,024	224	249	426
Aluminum	234	369	1,403	47	8	411
Molybdenum	380	402	1,805	453	217	624
Sulphur	731	1,018	31	1,617	1,379	679
Cadmium	103	75	290	35	-	101
A.D.I.N.	100	186	5	339	488	126
Prussic Acid	4	3	1,472	18	15	299
Boron	223	522	964	556	929	453
Nickel	-	115	1,021	29	-	233
Cobalt	238	9	813	241	13	260
N.D.F.	878	952	838	232	865	580
Lignin	70	108	-	80	799	52

* Package analysis includes moisture, protein, calcium, phosphorus and nitrates on roughages and silages.

Fibre and nitrates on roughages and silages and pH on silages and moisture, bushel weight, protein, calcium and phosphorus on grain samples.

Table 10 Selected Types of Analyses Requested as a Percent of Total Samples Received

Analysis Conducted	1982-83 (%)	1983-84 (%)	1984-85 (%)	1985-86 (%)	1986-87 (%)	1987-88 (%)	Average
Selenium	14.5	9.1	8.8	10.2	16.9	9.5	11.5
Copper	17.0	8.8	8.3	12.3	19.2	15.5	10.7
Manganese	14.0	8.8	7.6	12.1	16.1	14.6	9.9
Zinc	16.4	8.9	8.3	12.4	18.6	12.6	12.9
Boron	9.0	1.1	2.7	8.5	4.0	7.2	3.3
Magnesium	12.6	6.9	6.1	13.8	10.9	5.2	9.3
Potassium	13.2	5.6	5.8	13.1	12.6	12.4	10.4
Sulphur	11.0	3.6	5.3	10.4	11.7	10.7	7.0
A.D.I.N.	1.2	0.5	1.0	1.7	2.4	3.8	1.6
Fat	0.7	0.7	0.9	2.0	1.5	2.8	1.1
N.D.F.	8.1	4.3	5.0	4.7	1.7	6.7	4.3
Lignin	1.0	0.3	0.6	4.9	0.6	6.2	2.1
Total Samples	12,455	20,395	19,226	17,273	13,871	12,864	16,014

Table 11 Number of Feeding Program[*] Requests on Regular Reports Printed for the Past Five Fiscal Years

	1983-84	1984-85	1985-86	1986-87	1987-88	Average
Number of Regular Reports	1618	1753	1750	1585	1207	1582.6
Species						
Beef	166	163	140	94	58	124.2
Dairy	54	36	14	36	7	29.4
Swine	67	44	33	33	17	38.8
Sheep	14	11	5	5	6	8.2
Horses	32	21	11	18	5	17.4
Poultry	4	4	3	3	1	3
Others	4	1	-	-	5	2
Total	341	280	206	189	99	223

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* A feeding program usually involves several specific ration recommendations.

Table 12 Number of Feeding Program Requests on Demonstration Reports Printed for the Past Five Years

	1983-84	1984-85	1985-86	1986-87	1987-88	Average
Number of Demonstration Reports	792	965	882	793	773	841
Species						
Beef	30	20	6	19	2	15.4
Dairy	19	13	9	8	0	9.8
Swine	21	12	6	8	1	9.6
Sheep	7	3	1	1	0	2.4
Horses	5	6	6	6	1	4.8
Poultry	3	3	3	2	0	2.2
Others	1	1	1	-	0	0.6
Total	86	58	32	44	4	44.8

Research and Development

Branch staff were involved in research and development projects in cooperation with producers, field staff, and in some cases, agencies outside of the department. The degree of involvement by branch staff ranged from doing the statistical analysis of the data to conducting the complete trial. 1987-88 projects included:

A. Animal Growth and Implants

1. Comparison of Ralgro/Compudose/Synovex among steer calves.
2. Allometric relationships between body weight and scrotal circumference in young bulls.
3. A model for predicting scrotal circumference in test station rams.
4. The effects of Ralgro on dam reproduction and calf growth (further analysis).
5. Entry group effects on ADG in test station rams.
6. Relationship between growth and scrotal circumference in young rams and bulls.

B. Reproduction and Breeding

1. Field testing the progesterone "preg check" kit responses to calving interval.
2. 1987-88 cow-calf summary with emphasis on herd reproduction.
3. Evaluation of the effects of Synovex C in replacement heifers - growth and reproduction traits.
4. Luteal function as influenced by GNRH.

5. Effects of early calf removal on the onset of estrus, and changes in pregnancy rate in cattle.
6. Comparison of hand versus pen mating in swine management.

C. Disease and Pest Control

1. Disease status and its effects on the performance of test station bulls.
2. Preliminary studies on the effects of Johnes disease and OPP on preweaning growth of sheep.
3. Comparison of Ivomec and Spotton among feedlot steers and heifers.
4. Effects of Ivomec on calf growth and performance.
5. Plant bug phenology and assessment of damage to pastures.
6. Studies on the prevalence of eye worms in cattle.
7. Effects of Ivomec on steer gains - field study.
8. West Central Forage Association Ivomec trial for steers on pasture.
9. Comparison of lung damage due to chronic and acute pneumonia.
10. Studies on mastitis status through somatic cell monitoring in bulk tanks.
11. Studies on the degree of association between vaccination and disease frequency.
12. Black fly larva in tributary streams.
13. Study of new pour-on treatment for control of horn flies and other biting flies, (registration data expected).
14. Study of pour-on treatment for sheep ked control.

15. Preliminary survey of culecoides vectors for blue tongue in Alberta.
16. Demonstration of self treatment systems for protecting livestock from biting flies, black flies and mosquitoes.

D. Nutrition and Management

1. Ruminant Feed Evaluation Unit - coordinated activities concerned with the evaluation of feeds.
2. Initiated and financed a study with the U. of A. on the use of whole barley for growing and finishing cattle.
3. Initiated and shared the financing of a study on the use of canola oil and meal in finishing diets of feedlot cattle.
4. Coordinated a study on the nutritional quality of native range in the Peace River District.
5. Assisted with an on-farm demonstration comparing triticale to barley silage for growing cattle.
6. Initiated and financed two trials to evaluate the use of legumes in swine diets.
7. Financed an evaluation of the 1987 NRC Swine nutrient requirements for gilts and sows.
8. Participated in an on-farm demonstration of the "Heap Silage Technique".
9. Participated in an on-farm demonstration on the computerized feeding of dairy calves for beef.
10. A comparison of three rearing facilities for pigs - 3 on-farm demonstration trials.
11. Three experiments on the effects of castration, dehorning and a combination thereof on feedlot gains.

12. Evaluation of differences in trace mineral content among livestock feeds analysed at the Alberta Agricultural Soils and Animal Nutrition Laboratory.
13. Predicting nutrient requirements for different classes of beef cattle using digestible energy intake, ADG and other factors.
14. Measuring the effect of fertility regimes on pasture production by monitoring animal gains.
15. Evaluation of feeding triticale silage to finishing beef cattle, in combination with high or low moisture barley.
16. Analysis of temperature changes in hay bales using Siloguard, Haymate and Freshcut.
17. Analysis of feeding beet pulp to feedlot cattle.
18. Evaluation of field peas as a potential feed for swine.
19. Comparison of mineral, vitamin and protein supplementation in horses.
20. Potential of triticale grain as a feed for finishing cattle.
21. Farming for the future, on-farm demonstration "A Beef Herd Management Plan for Improving Production Efficiency of Cow-Calf Producers".

E. Other

1. Comparison of dipstick and truck mounted milk meters for measuring fluid milk in bulk tanks.
2. Current production practices in the Alberta swine industry and the 1987 Alberta swine survey.

3. Effects of cultural practice (plough versus not ploughed) on yields of wheat, barley and canola.
4. Yield comparison among varieties of barley.
5. Effects of various copper levels on the yields of forage.
6. Comparison of yields in response to nitrogen fertilization in Otal barley.
7. Comparison and verification of ultrasonic fat measurements in pigs: evaluation of technician differences.
8. Fitting mathematical models using information from previous years to predict hay yields in Alberta.
9. Development of a "producer compliance/audit" program for the cow-calf part of the red meat stabilization program.

Technology Transfer

Branch staff were involved in enhancing the process of incorporating improved husbandry practices on farms through their extension activities. Producer meeting, personal correspondence and contacts, mass media releases, newsletters, factsheets and on-farm demonstrations were used to distribute livestock information to primary producers, industry, the general public and other government agencies. Technology transfer continued to be the major activity of branch staff.

A. Workshop, Extension Meetings and Field Days

The branch organized and/or participated in a number of other major ways in numerous conferences, seminars, meetings, workshops and field days, including such major events as Managing Agricultural Technology for Profit, Alberta Dairy Seminar, Alberta Pork Congress, Alberta Pork Seminar, Feed Industry Conference, Western Nutrition

Conference, and the Alberta Sheep Symposium. Nine regional beef seminars were held in various parts of the province to follow up on the theme of reproduction from the previous year's Alberta Beef Symposium. As well, several bull evaluation workshops and seminars were run to emphasize the importance of reproductive evaluation of bulls in the reproductive performance of the herd. The branch staff also spoke at many local extension meetings which were organized by regional and district staff on many different aspects of livestock production. Staff also spoke at several meetings that were organized by industy and agribusiness.

In-service workshops on integrated beef herd management and livestock pest control were conducted for agricultural fieldmen, district agriculturists and other department staff.

Some of the topics addressed by branch staff at various extension meetings included: agricultural credit for livestock production; tripartite stabilization; herd management for beef, sheep and goats; sheep flock performance records; "spider syndrome"; breed selection; cross breeding programs; sire selection; reproductive evaluation of bulls; predator control; black fly control; warble control; louse control; growth implants; economics of beef herd management; and options in livestock marketing.

Topics emphasized in beef nutrition meetings included mineral nutrition, the effect of nutrition on reproduction and feedlot management. In dairy a major emphasis was placed on forage quality, raising replacement heifers and mineral nutrition. Areas of emphasis in swine nutrition included on-farm manufacturing of feed, field peas for swine and canola meal in swine rations. Topics presented at sheep nutrition meetings varied widely.

In total branch staff were involved as speakers in at least 160 meetings, conferences, field days, workshops, etc. Although the topics presented were wide ranging, it is becoming apparent that the overall extension program is becoming more targeted.

B. Mass Media Presentations

Branch staff were active in preparing news releases and information articles on various beef and sheep production topics for radio and the popular press. At least 50 articles were prepared for the department's Agri-News, for the radio program (Call of the Land), newspapers and/or trade magazines.

The branch published one producer newsletter, Sheep Footnotes, on a regular monthly basis during the year. It also began publishing a biannual beef and sheep research update newsletter, primarily for department staff.

As mentioned earlier in the report the major emphasis of the branch was the production of the cow-calf reference binder and study guide.

C. Requests For Service

The major component of the branch's extension efforts continued to involve responding to individual requests from department staff, producers, other government departments, agribusiness, veterinarians, private consultants, local governments, Agriculture Canada and the research community.

Requests ranged from very specific to general in nature and included topics related to virtually all aspects and species of livestock.

Staff Development

Branch staff attended a number of workshops, seminars, courses and professional society meetings during the year. The purpose was to improve personal, professional and managerial skill and to keep abreast of new subject matter developments in the areas of livestock production. There was also a considerable emphasis on improving expertise in the use of computers.

Staff Changes

Don Scheer remained on secondment to the Crow Benefit Offset Program. Dale Engstrom was appointed Acting Section Head in May.

Abdul Suleiman was appointed Acting Ruminant Nutritionist in October.

John Knapp, Sheep Specialist in Airdrie, was promoted to Regional Director in Fairview in July. Cathy Gallivan transferred from the Sheep/Goat Specialist position in Edmonton to the Airdrie position in September and, with this position, also assumed responsibility for the Sheep R.O.P. Test Station.

Wray Whitmore won the competition for the Sheep/Goat Specialist position in Edmonton. He left the Nutrition Section and assumed his new duties in October, together with full responsibility for the Sheep R.O.P. Home Test Program.

Barry Yaremcio was seconded from Field Services to become Laboratory Nutritionist in January.

DAIRY PRODUCTION BRANCH

Dairy production branch activities and services included dairy farm inspection, data processing of milk recording information and support for extension, advisory and research functions relating to the dairy industry.

The dairy industry in Alberta was very healthy. Abundant supplies of excellent quality feed combined with good prices for cull cows resulted in improved production levels per cow. There was increased use of computer technology on dairy farms particularly in milk recording and feeding management.

Dairymen expressed a desire to be informed and advised as quickly as possible concerning the results of research and applicable new technology.

The quality of Alberta's milk supplies continued to improve during the year. Nearly all milk producers met the premises and quality requirements for a certificate of registration.

There was considerable international interest in Alberta's dairy industry, particularly in dairy embryos. A highly successful contract to Russia was completed during the year, which should provide future opportunities in this expanding market.

European immigrants with a background in the dairy industry view Alberta as an attractive location for investment in a dairy farming enterprise.

Restructuring of the milk marketing mechanism in the province was the focus of discussions at both producer and processor levels. Equitable distribution of the milk supply to optimize producer and processor benefit was still unresolved as of March 31, 1988.

Levies under the market sharing program on industrial milk were reduced in response to improved world markets for skim milk powder.

Alberta milk producers, through their association, contributed directly to the financial support of dairy research at the Agriculture Canada Research Station, Lethbridge.

Resource Services

The dairy production branch assisted regional staff in providing workshops and seminars on timely production issues. Regional dairy specialists were very effective in the identification, development and delivery of dairy extension services throughout the province. Topics such as condition scoring, quota management, feeding, raising replacements and milking management were very well received by the industry.

A multi-regional initiative in forage production and managment was very successful. The meetings, held in Nisku, Olds and Lethbridge attracted over 400 people.

The first annual Alberta Dairy Congress held at Leduc provided exhibitors and guest speakers with an excellent opportunity to present new technology to Alberta's milk producers and the general public. This dairy trade and technology event was highly successful, attracting many exhibitors and over 1,500 people.

A film was developed titled "The Story of Milk" which covers milk from the cow to the consumer. This film is primarily for school and general public use.

The sixth annual Alberta Dairy Seminar was held in Banff. This seminar was again sponsored by the University of Alberta, Alberta Milk Producers' Association and Alberta Agriculture. Topics included: bilateral and multilateral trade issues, tax reform, feeding the high producing cow, reproduction and technological change in the dairy industry.

The newsletter, "Alberta Dairy Producer", was published monthly. Increased emphasis on reporting of dairy research activities was well received by the industry. This publication continues to be a primary source of marketing and production information for the dairy industry.

Several factsheets were developed for use by Alberta dairy producers. Topics included: condition scoring, raising replacements, health management, interpretation and use of Dairy Herd Improvement reports, as well as milking management. New factsheets were distributed to producers with the Alberta Dairy Producer newsletter.

In-service training featured milk quality issues, refrigeration, milk metering and regional program development.

A research project at the University of Alberta concerning the potential impact of a multiple component pricing system for milk was supported. Assistance was provided to a research project on new mastitis control technology at the Agriculture Canada Research Station, Lethbridge. The branch co-operated with the University of Lethbridge in a study on the probable effect of bovine somatotropin use on the Alberta dairy industry.

Staff involvement with research institutions was increased. Research projects and on-farm demonstrations included progesterone testing, clitoral stimulation, fly control and embryo transfer technology.

Dairy Farm Inspection

The Dairy Production Branch continued to provide inspection and advisory services to Alberta dairymen in the areas of milk quality, milk production, equipment standards, construction and upgrading of dairy facilities.

Dairy Farm Inspection staff performed 3,304 farm inspections in 1987-88 and an additional 1,819 farm consultations.

A total of 36,743 milk samples were analyzed for compliance with current milk quality standards. The Milk Grade and Price program, during the twelve month period ending March 31, 1988 recorded 97 Standard Plate Count violations, 16 Freezing Point violations and 72 Inhibitor violations - totalling 185 violations, a decrease of 63 violations from the year previous.

The milk grade and price program and advisory services provided to producers continued to contribute to the excellent quality of milk produced in Alberta in 1987-88. The milk processors, through farm service programs continued to support milk quality improvement on dairy farms.

A non-compliance rate of 3.8% was achieved in the fluid milk sector, a further improvement from 4.3% for the previous year. Thirty four loads of milk were destroyed due to inhibitor contamination, a decrease of 13 loads compared to 1986-87.

Funds collected from producers resulting from milk grade deductions, were allocated to pay innocent producers for lost milk and to compensate milk transport operators when confirmation was required for suspicious positive loads and for disposal of loads tested positive. The remainder of the funds were redistributed to milk producers on a monthly basis by the Alberta Dairy Control Board.

The branch co-operated with the Dairy Control Board in providing advisory services necessary to permit a final group of 175 producers to participate in the graduated entry program. Since 1974, a total of 1,105 Alberta dairymen obtained fluid milk quota, at no cost, through the graduated entry program.

As of March 31, 1988, there were 1,502 milk producers in Alberta, a decrease of 47 from the year previous. Of that total 1,495 were certified to supply raw milk to the fluid market and 7 supplied milk for industrial purposes only. Industrial milk producer numbers further decreased by 23 as producers continued to upgrade their facilities to meet industry certification requirements or voluntarily discontinued milk production.

Bulk milk somatic cell counts continued to be monitored and advisory assistance was provided to reduce the incidence of mastitis in dairy herds. Bulk milk tank somatic cell counts averaged 313,908 cells per millilitre for certified producers and 547,194 cells per millilitre for industrial producers. There was a significant improvement in the average somatic cell count for certified producers as compared to 1986-87.

The Alberta Award of Excellence sponsored by Alberta Agriculture was introduced in 1986 to recognize dairy producers for excellence in quality milk production and maintenance of dairy premises. One hundred and twenty five milk producers were presented with the award at the annual Alberta Dairymen's Association Convention in February 1988, compared to 76 in the previous year - an excellent response by the milk producers of Alberta.

TABLE 1

The following table summarizes the activities of Dairy Farm Inspection. Comparisons are based upon April 1 to March 31 year basis.

	1986-87	1987-88
Number of Certified Milk Producers	1,519	1,495
Number of Industrial Milk Producers	30	7
TOTAL PRODUCERS	1,549	1,502
Inspections of Dairy Farm Premises	3,155	3,304
Non-Inspection Dairy Farm Calls	1,474	1,819
TOTAL FARM CALLS	4,629	5,123
TOTAL RAW MILK SAMPLES ANALYZED	38,561	36,743
Quality of Milk Samples Analyzed		
Fluid Milk Samples Non-Compliance (75,000/mL S.P.C.)	4.3%	3.8%
Industrial Milk Samples Non-Compliance (200,000/mL S.P.C.)	4.0%	8.0%
Industrial Milk Samples which met Fluid Milk Standards	87.1%	84.0%
Average Somatic Cell Counts - Fluid	364,490	313,908
(Leucocytes) - Industrial	618,570	547,194
Number of Violations - SPC	119	97
- Inhibitors	105	72
- Cryoscopic Analysis	24	16
TOTAL VIOLATIONS	248	185

Number of Violations

	1983-84	1984-85	1985-86	1986-87	1987-88
1 Violation	212	199	179	153	133
2 Violations	87	73	64	63	38
3 Violations	27	33	19	19	10
4 Violations	7	7	10	7	2
More than 4	9	4	2	6	2
	342	316	274	248	185

Milking Management

A milk metering project was completed in co-operation with Alpha Milk Company, Red Deer. The truck mounted milk meter completed 1,055 milk pickups, averaging 6.5 litres less than the dipstick measurements. This difference represented nearly one million dollars to Alberta's dairy industry. While the accuracy of the milk meter was verified before and after the project, capital cost, maintenance and functional issues need to be resolved.

Alberta's milk meter studies are contributing to the general knowledge and functional requirements of truck mounted milk meters for payment purposes in North America.

Technical assistance was provided to Manitoba Agriculture. An Alberta milking management specialist conducted a very successful seminar and workshop for the Manitoba staff responsible for milk quality and milking management extension services.

A fifty dollar user fee was implemented July 1, 1987 for milking equipment evaluations, excluding new installations checked for proper function.

A total of 91 equipment analyses were completed by the two milking management specialists. Another 33 farm calls were completed in response to milking equipment cleaning problems. Twenty four stray voltage concerns were investigated. There were 18 producer consultations on proposed purchases and 29 new installations evaluated for proper design and function.

Milk Recording

All field services and fees associated with the Alberta Dairy Herd Improvement (D.H.I.) and federal Record of Performance (R.O.P.) programs were administered by Alberta Dairy Herd Improvement Services (A.D.H.I.S.). Fees for milk recording remained at $5.50 per cow per year for owner-sampler and $19.00 per cow per year for supervised service. The cost of individual cow somatic cell count data remained unchanged at $2.00 per cow per year.

As of December 31, 1987, 129 herds were enrolled on the supervised D.H.I. option. At an average herd size of 74 cows, this totalled 9,574 cows. An additional 119 herds comprised of approximately 8,000 cows were enrolled on the federal R.O.P. program. The owner-sampler D.H.I. option was subscribed to by 644 dairymen who enrolled 40,857 cows for an average of 63 cows per herd. The somatic cell counting service continued to be very popular with 675 herds and 43,500 cows enrolled.

The continued improvement in production per cow of the Alberta dairy herd, along with only a slight increase in milk and dairy product sales, has meant a decline in the number of cows in Alberta and those on test. The challenge remains to make milk recording a basic management tool on every dairy farm in Alberta.

During the year, system support functions were transferred from Alberta public works supply and services to A.D.H.I.S. Changes were made to the agreement between Alberta Agriculture and A.D.H.I.S. to accommodate the privatization of data processing responsibilities.

The inclusion of qualified owner-sampler records in sire proofs is a significant step forward for the milk recording industry. Access to the wealth of information in owner-sampler records will assist in the genetic advancement of the Canadian dairy herd.

Alberta Agriculture's funding to milk recording is at a level not enjoyed by the dairy industry in any other province. Other sources of funding for milk recording are Agriculture Canada and fees for services provided by A.D.H.I.S. to the dairy producers of Alberta. Alberta Agriculture also provides lab testing, extension services and mainframe computer access as well as office space for most of the A.D.H.I.S. field staff.

R.O.P./D.H.I. LEVEL OF PERFORMANCE

(As of December 31, 1987)

R.O.P.

Breed	Number of Records	Ave. Milk (kg.)	BCA Milk	Ave. Fat (kg.)	BCA Fat
AYRSHIRE	549	6,120	173	246	169
BROWN SWISS	6	5,682	143	233	147
GUERNSEY	1	4,112	123	165	99
HOLSTEIN	5,396	7,314	154	265	152
JERSEY	364	4,595	154	226	140
TOTAL	6,316	7,051	156	261	153

OFFICIAL D.H.I.

Breed	No. of Records	Ave. Milk (kg.)	BCA Milk	Ave. Fat (kg.)	BCA Fat	Ave. Protein (kg.)	BCA Protein
AYRSHIRE	91	6,160	175	236	166	214	191
BROWN SWISS	70	6,155	160	248	161	225	170
GUERNSEY	37	5,391	159	245	144	199	168
HOLSTEIN	6,905	7,672	165	267	156	245	166
JERSEY	171	5,088	170	237	147	201	179
TOTAL	7,274	7,566	165	266	156	243	167

Average protein (kg.) and protein BCA are based on fewer records than total number for breed in table.

OWNER SAMPLER D.H.I.

Breed	No. of Records	Ave. Milk (kg.)	BCA Milk	Ave. Fat (kg.)	BCA Fat	Ave. Protein (kg.)	BCA Protein
AYRSHIRE	248	5,426	149	217	146	190	160
BROWN SWISS	146	6,555	159	250	152	229	159
GUERNSEY	28	5,403	158	220	131	204	167
HOLSTEIN	31,316	6,875	146	242	140	223	150
JERSEY	254	4,248	139	190	115	181	156
TOTAL	31,992	6,840	146	241	140	222	150

Average protein (kg.) and protein BCA are based on fewer records than total number for breed in table.

ALBERTA DHI COW/HEIFER ENROLLMENT TOTALS

(as of December 31, 1987)

	D.H.I. Supervised				D.H.I. Owner-Sampler				
	NIP A or Registered	NIP U or Higher	Grade	Total Super-vised	Registered	NIP A or Higher	NIP U or Grade	TOTAL Owner-Sampler	D.H.I. Grand Total
Ayrshire	38	20	2	60	80	10	230	320	380
Brown Swiss	68	1	6	75	20	17	157	194	269
Guernsey	44	3	0	47	3	2	27	32	79
Holstein	3,078	5,204	929	9,211	2,424	18,878	18,629	39,931	49,142
Jersey	166	4	9	179	168	31	177	376	555
TOTAL	3,394	5,232	946	9,572	2,695	18,938	19,220	40,853	50,425

DAIRY PROCESSING BRANCH

Overview

Total milk supply was up slightly from the previous year. Fluid milk sales, on a per capita basis, continued to improve but were still significantly below the level of six years ago. Better quota management by producers resulted in no milk being shipped out of the province during the "flush" season. During this time the milk drying plants and some cheese manufacturing plants were operating at maximum capacity.

Dairy Manufacturing Plants

The renovation and modernization of most plants continued in varying degrees of complexity. A high level of interest continued for the establishment of dairy manufacturing plants, particularly for the manufacturing of ice cream, cheese and the use of goat's milk. Although several enquiries were received, few applications were made because of high cost and uncertainty of milk supply.

Existing plants continued to investigate the addition of product lines to their operation. A specialty cheese plant commenced production of a gourmet cream cheese. The manufacturing process being used is under an arrangement with a European firm. The plant's existing distributor and marketing network will be used for the new product which is sold under the local brand name.

Construction started on a small fluid milk and ice cream plant in the north-east part of the province. Initially scheduled to commence processing early in 1988, several delays have been encountered. The completion date is not known at the time of writing.

The Donalda Co-operative Creamery Association closed their butter manufacturing plant. The plant had been in operation for 60 years and was one of the last rural creameries that relied on farm separated cream. The number of shippers at the time of closing was 21, many of whom are now shipping to another creamery in the area.

An independently operated plant in the Medicine Hat area commenced construction of an addition that will double the size of the plant. Included in the addition is an expanded cold storage, enclosed loading facilities, employee rooms and provisions for a laboratory.

Some cheddar cheese plants have replaced their bed or horizontal cheese presses with the mobile "A" frame or vertical type with a resulting improvement in space utilization.

In co-operation with the Calgary Zoo, the Alpha Milk Company, Calgary, introduced a two litre package of ice cream featuring the face of a panda in white and black ice cream with a border of strawberry pink. While molded designs are not new, the detail and sharpness are unique and the process is being patented. The development and introduction coincided with the presence of two Giant Pandas at the Zoo and tied in with the Panda Magic theme of the City of Calgary.

A small family operated cheese plant that started manufacture of specialty cheese in the Edmonton area a year ago has closed down. Manufacturing and marketing costs in relation to the volume produced was said to be the deciding factor.

The major program introduced a year ago for the inspection and testing of milk pasteurization units continued as a high priority. All components of the pasteurizers are inspected and subjected to a variety of tests to ensure that all dairy products processed through them are effectively pasteurized and that the pasteurized products cannot be contaminated with raw product. Several plants have completed the necessary modifications and have had the units approved or are awaiting the final inspection. The plants must have the pasteurization units approved by the end of calendar 1988 to be eligible for the 1989 license. The co-operation from and interest by the industry has been exceptionally good, making this important branch program much easier to achieve.

In preparation for the new requirements that all operators of pasteurization units be licensed, the branch has prepared a comprehensive Pasteurizer Operator Manual. This will be used as a study guide in the training and licensing of the operators and as a reference manual for the plants. The training, examination and licensing of the pasteurizer operators will commence in 1989.

Plant inspection programs were continued to ensure compliance of all Alberta dairy manufacturing facilities and their products with existing regulations.

The branch continued to participate in the federal in-depth plant inspection program. Most of the fluid milk processing plants are newly built or recently renovated and continue to receive high scores upon inspection.

New inspection guidelines were introduced by Agriculture Canada after consultation with the provinces. These guidelines reflect new technologies, equipment and components available to the industry. As a result of these, the plant scores dropped in all areas.

This branch is participating, and represents the four western provinces, on a committee to review and update the plant inspection program. This is the first major review since the program was introduced in 1971. The committee members represent provincial and federal governments and the dairy industry.

Current positions and comparative data for last year is as follows:

	1986-87	1987-88
Alberta Average Plant Score	86.1	84.3
National Average Plant Score	82.6	82.2
Lowest Scoring Plant In Alberta	76.4	72.7
Highest Scoring Plant in Alberta	99.1	98.6

Dairy Products

Bacteriological and compositional standards of fluid and manufactured dairy products remained very high and substantially higher than the regulatory minimum. The branch continued to concentrate on milk product keeping quality as reflected by a stressed product test as the yardstick by which quality was measured. This more stringent test is necessary since products must remain fully acceptable to consumers after sometimes lengthy periods in the distribution system, not always under ideal storage conditions. Dairy processing specialists investigated isolated lapses in quality rather than chronic difficulties in producing satisfactory products.

Virtually all freshly processed milk met Health Standards. After subjection to severe conditions (7 days at 7°C), 78.0% were still within requirements of the regulations. The branch continues to work towards 100% compliance at both levels.

Licensing

Licenses Issued	1986-87	1987-88
Milk & Cream Graders & Testers	90	77
Cream Graders	65	40
Plant Milk Graders	135	117
Bulk Tank Milk Graders	287	242
Dairy Manufacturing Plant	37	49

Regulatory

Dairy Processing Specialist activities in regulatory functions were:

	1986-87	1987-88
Dairy Plant Inspections	400	508
Cream Grades Checked	958	1216
Cream Grades Adjusted	1	0
Cream Tests Checked	484	738
Cream Tests Adjusted	2	0
Bulk Tank Trucks & Drivers Inspected	150	208

Margarine

The branch's responsibilities under the Margarine Act were carried out at a similar level of activity as in previous years. Margarine produced and/or sold in the province was sampled and analyzed throughout the year and found to comply fully with compositional requirements. There were continued attempts to market imitation dairy products in contravention of the Dairy Industry Act.

As well as infringing on the Dairy Industry Act, methods used by promoters frequently contravened other regulations, e.g. those of the Health Protection Branch and Consumer and Corporate Affairs. This branch will continue to collaborate with other agencies to regulate the activities of promoters of imitation dairy products.

Extension

Dairy processing specialists worked closely with dairy processors in the implementation of technological changes and in broadening the range of dairy processing in the province. A major extension activity in recent years has been a voluntary Certification Program for dairy plant employees to assist in attaining improved quality through increased education and awareness. Lower turnover of staff in most dairy plants accounts for the reduction in issue of Dairy Plant Worker certificates. The awarding of certificates in specialist categories such as Cheesemaker, Plant Sanitarian, and Pasteurizer Operator, has increased.

The licensing of Milk and Cream Graders and Testers, and Bulk Milk Graders is a legislative responsibility of this branch. In view of the important role of the Bulk Milk Grader in the collection of samples by which the producer is paid, especially since the introduction of the milk grade and price program, the branch has increased emphasis on testing, retesting and inspection of Bulk Milk Graders.

A film for the training of Bulk Milk Graders in the correct procedures for picking up milk was produced during the year in co-operation with Information Services Division. Being an Alberta

Agriculture production it does not rely on material from other jurisdictions whose requirements may differ slightly from ours.

Together with Agriculture Canada and the Alberta Dairymen's Association, the processing branch continues to be active in sponsoring and judging dairy product quality competitions. Most competitions are based on monthly samples. Winners are recognized annually at the Dairymen's Convention.

Special Projects

The principle activity of Special Projects to March 31, 1988 was the preparation of amendments to the Dairy Industry Act and relevant changes in the proposed new Dairy Industry Regulations under the Act.

The amendments to the Act received royal assent during the year and will be proclaimed at the same time as the Regulation. Consultations with industry and other government departments was completed by year end. Proclamation of the Regulation is expected early in the new year.

Other activities related to an investigation of the security requirements for dairy manufacturing plants under the Dairy Industry Act; the preparation of a proposal to establish a dairy producers' protection fund for discussion with industry; ongoing consultation with industry on regulatory and legislative matters; investigating and assisting in the resolution of problems associated with the dairy industry.

Sometime was devoted to aquaculture on behalf of the department. The branch provides a resource person to develop and maintain a close working relationship with the private and public sectors and to respond to requests for information.

TABLE I

Estimated Farm Value of Alberta Milk Production April 1987 - March 1988

The quantity, price, value and utilization of milk production during April 1987 to March 1988 are reported in the following table. To indicate changes from the previous year, 1986-87 figures have been included.

	Year	Butterfat Production '000 kg	Milk Equivalent '000	% of Total	Prices $	Value $'000
Butterfat for Creamery Butter	1987-88	684	19,542 L	3.32	4.610/kg	3,153
	1986-87	787	28,485 L	3.88	4.622/kg	3,638
Milk Purchased for the Manufacture of Powder and Butter (1)	1987-88		115,527 L	19.60	39.93/hL	46,130
	1986-87		114,790 L	19.81	39.41/hL	45,239
Milk for Cheesemaking	1987-88		119,496 L	20.27	39.93/hL	47,715
	1986-87		110,212 L	19.02	39.41/hL	43,435
Milk for Concentrating and Milk & Butterfat for Ice Cream & Misc. Products (2)	1987-88		57,182 L	9.70	41.63/hL	23,805
	1986-87		54,963 L	9.49	41.21/hL	22,650
Milk Purchased for Fluid Purposes	1987-88		260,119 L	44.13	47.89/hL	124,571
	1986-87		256,694 L	44.31	49.31/hL	126,576
Kept on Farms, Skimmilk for Creamery Butter	1987-88		17,588 L	2.98	18.38/hL	3,233
	1986-87		20,228 L	3.49	18.27/hL	3,696
Estimated Federal Subsidy	1987-88					21,043
	1986-87					19,852
TOTAL	1987-88		589,454			269,650
	1986-87		579,372			265,086

(1) Includes milk used for the making of cottage cheese.

(2) Does not include butterfat from creamery butter used in the manufacture of ice cream.

TABLE II

Estimated Production and Value of Factory Dairy Products April 1987 - March 1988

The following table shows the quantity, price and value of dairy products manufactured or processed in Alberta dairy manufacturing plants during April 1987 to March 1988, with corresponding figures for 1986-87 added to provide a means for comparison.

	Year	Quantity ' 000	Price $	Value $ '000
Creamery Butter (kgs)	1987-88	7,062 kg	5.461/kg	38,566
	1986-87	7,409 kg	5.454/kg	40,408
Cheddar Cheese (kgs)	1987-88	6,836 kg	6.714/kg	45,897
	1986-87	6,822 kg	6.746/kg	46,021
Variety Cheese (kgs)	1987-88	5,427 kg	5.906/kg	32,052
	1986-87	5,022 kg	5.766/kg	28,957
Ice Cream (litres) (1)	1987-88	29,695 L	1.860/L	55,233
	1986-87	31,108 L	1.850/L	57,549
Fluid Milk Sales (litres)	1987-88	218,474 L	.800/L	174,779
	1986-87	215,084 L	.790/L	169,916
Fluid Cream Sales (litres)	1987-88	10,146 L	1.570/L	15,929
	1986-87	9,520 L	1.570/L	14,946
Fluid Skimmilk, Buttermilk and Chocolate Sales (litres)	1987-88	38,360 L	.862/L	33,066
	1986-87	32,385 L	.862/L	27,916
Miscellaneous Manufactured Products (2)	1987-88			119,597
	1986-87			122,189
TOTAL	1987-88			515,119
	1986-87			507,902

(1) Includes hard and soft ice cream.

(2) Includes concentrated milk products, cottage cheese, whey cheese and yogurt.

TABLE III Alberta Dairy Statistics 1955-1987

YEAR	TOTAL MILK	ICE CREAM		BUTTER	
	1,000,000 of Units	Production	# plants	Production	# plants
1955	1,438 lb	2,716 gal	15	31,326 lb	89
1960	1,650 lb	3,623 gal	18	37,338 lb	86
1965	1,641 lb	5,242 gal	16	36,562 lb	81
1970	1,529 lb	5,634 gal	16	29,311 lb	59
1973	1,396 lb	6,332 gal	15	23,282 lb	46
1974	1,284 lb	6,588 gal	16	18,695 lb	36
1975	1,276 lb	6,671 gal	16	20,587 lb	33
1976	1,273 lb	6,713 gal	14	17,843 lb	25
1977 (1)	1,251 lb	6,835 gal	11	18,342 lb	19
1978	426 hL	31,859 L	10	6,946 kg	19
1979	450 hL	30,343 L	10	7,117 kg	18
1980	480 hL	31,906 L	10	7,863 kg	16
1981	528 hL	27,873 L	8	8,260 kg	13
1982	585 hL	27,797 L	8	8,475 kg	13
1983	564 hL	30,891 L	8	7,800 kg	13
1984	584 hL	31,457 L	9	8,161 kg	11
1985	562 hL	31,287 L	10	6,372 kg	11
1986	579 hL	31,108 L	10	7,409 kg	11
1987	589 hL	29,695 L	11	7,062 kg	11

(1) Prior to 1977, yearly totals were calculated on a calendar year basis. From 1977 to date all figures are based on a fiscal year basis (April 1 - March 31).

Alberta Dairy Statistics 1955-1987

CHEDDAR CHEESE		VARIETY CHEESE		FLUID MILK SALES
Production	# plants	Production	# plants	
2,151 lb	10	---		(2) 296,982 lb
1,760 lb	7	---		382,835 lb
2,188 lb	6	---		384,754 lb
3,357 lb	6	155 lb	3	414,034 lb
4,768 lb	6	913 lb	4	451,516 lb
4,884 lb	6	2,186 lb	6	466,816 lb
6,307 lb	7	2,406 lb	6	468,599 lb
6,872 lb	7	3,161 lb	6	175,219 qt
8,013 lb	6	4,557 lb	6	197,238 L
3,935 kg	6	2,386 kg	8	202,171 L
3,649 kg	6	3,007 kg	11	248,936 L
3,921 kg	6	3,159 kg	11	263,016 L
3,599 kg	6	3,321 kg	11	270,931 L
4,023 kg	6	3,651 kg	10	269,783 L
4,160 kg	6	3,533 kg	10	261,411 L
5,768 kg	6	3,787 kg	10	256,798 L
6,315 kg	6	5,220 kg	10	256,032 L
6,822 kg	6	5,022 kg	10	256,989 L
6,836 kg	7	5,427 kg	9	266,980 L

(2) Includes Homo, 2%, Chocolate, Skimmilk and Buttermilk.

TABLE IV

Milk Cow Numbers

Year	No. Cows June 1st	Year	No. Cows June 1st
1950	297,800	1978	148,000
1955	285,000	1979	135,000
1960	279,000	1980	138,000
1965	262,000	1981	142,000**
1970	198,000	1982	158,000**
1973	169,000	1983	157,000**
1974	169,000	1984	157,000**
1975	170,000	1985	150,000**
1976	152,000	1986	152,000**
1977	155,000	1987	130,000**

* From 1955 forward, average butterfat test 3.5%; previous years were 3.6%.

** Census figure as of January 1 of that year.

HORSE INDUSTRY BRANCH

Industry Overview

The demand for horses for sport and recreation improved during 1987. Sales activity was strong and prices improved. The major gain involved Standardbred yearlings where average prices at the association's annual sale increased from $3,032 to $5,861.

Select Breed Sales

(Average Price $)	1983	1984	1985	1986	1987
Thoroughbred Yearling	6054	5707	6823	6254	5260
Standardbred Yearling	5627	2292	1845	3032	5861
Quarter Horse	2598	1497	1202	1261	2171

Interest in horse related sport and recreation activities continued to improve.

In excess by 35,000 horses were processed by the two Alberta horsemeat plants which operated to near capacity. Although statistics on prices are not available, considerable improvement was observed. Because of competition from U.S. plants, local prices increased to over $0.60 per pound live weight for the first time.

Education/Advisory Services

The branch, with a permanent staff of three professionals, provides educational and advisory services to horse owners in all areas of the province. The branch has a large and varied clientele which can be divided into primary producers who raise and market horses and those horse owners who purchase and use horses for sport and recreation. Although priority is given to the agricultural segment of the industry, considerable effort is given to providing all horse owners with information on general care and management of horses, as a large percentage of these people have limited background with livestock.

Extension programs consisted of conducting or supporting approximately 40 short courses throughout the province, as well as providing speakers for programs conducted by colleges and organizations.

Staff made a special effort this year to provide services to rural communities not normally visited. As a result, a series of one-evening seminars were given in 16 locations throughout the northern and eastern communities.

The branch prepared technical articles and bulletins for distribution and staff was available as a resource people for colleges, veterinarians, district agriculturists, private and public loans officers and other Alberta Agriculture staff relative to horses and the horse industry.

Another highlight was the Alberta Horse Breeders Conference that was conducted in cooperation with participating breed associations. Over 225 people registered for the program which included 15 highly qualified speakers.

Horse Improvement Program

The Horse Improvement Program is an annual breeders show designed to identify and recognize superior horses, breeders and trainers in Alberta. A committee consisting of representatives from participating breeds assists with the planning. The program continues to grow and develop more prestige and significance to the industry.

In 1987, 48 classes were available for the 14 participating breeds resulting in 797 horses being evaluated. Results are computerized allowing for breeders to use the program results to assist them in making selection and mating decisions. In some breeds, these are the only performance and production records available.

Summary of Horse Improvement Program Entries

	1984	1985	1986	1987
American Saddlebred	15	15	23	19
Arabian	81	79	92	126
Appaloosa	73	62	75	69
Belgian	31	31	24	22
Clydesdale	27	25	27	25
Morgan	16	37	33	29
Paint	23	29	30	28
Partbred Arabian	24	20	18	21
Percheron	21	27	34	45
Pinto	22	32	30	31
Quarter Horse	109	99	83	128
Sport Horse	35	25	23	20
Walkers	17	16	20	15
Welsh Pony	18	15	19	19
Total entries	534	512	531	597
Total horses	704	666	711	797

The draft horse section of the program was held during the Calgary Stampede and the light horse section was held during the last two weekends in September at the Westerner Fairgrounds in Red Deer.

Stallion Fertility Evaluation

Horse breeders can, through a referral by a veterinarian, have a fertility evaluation of stallions conducted by the branch in cooperation with Olds College. In 1987, 11 stallions were tested.

Market Development Assistance

The branch assists in administering Market Development grants of up to $25,000 for provincial horse breed associations.

During 1987-88, 9 breed associations were provided grants totalling $89,299. Projects supported include establishing breeders sales, printing brochures, incentives for successful Alberta-bred horses, provincial futurities, participating at trade fairs and general promotion and advertising.

In cooperation with Market Development and Agri-food, branch staff coordinated the participation of 17 Alberta breeds at Equi-Fair held at Spruce Meadows during the "Masters" horse show. The project involved a large horse exhibit, seminars and demonstrations.

The market for western horses from Alberta is increasing throughout Europe as many riders desire horses that are different and easy to ride and handle. The branch continues to advise breed associations and assist in coordinating exports.

Medication Control

As a service to provincial organizations, the branch conducts drug testing at main horse shows. During 1987, 315 horses were tested during 28 days of testing, with no forbidden products being detected. The program continues to foster fair competitions and is appreciated by the horse public and associations.

Summary of Testing

	1983	1984	1985	1986	1987
No. of shows tested	20	17	21	21	17
No. of days tested	31	31	31	25	28
No. of horses tested	268	390	390	432	315
No. of blood samples	60	98	93	125	65
No. of urine samples	196	283	288	307	246
No. of positive tests	1	2	1	0	0

Feeder Associations

During 1987, the branch assumed responsibility for administering the Feeder Associations program. Because the budget was not transferred until 1988, the report on this program remains with the Regulatory Services Branch report.

PORK INDUSTRY BRANCH

The farm cash receipts from sale of hogs in Alberta in 1987 were estimated as 283 million dollars, up 7 million from 1986. Total number of pigs sold for slaughter in Alberta increased by 6.9% from 1986, and the annual average price in Alberta declined 1.8% to $1.685/kg from $1.717 in 1986. As a percentage of total farm cash receipts, income from hogs declined from 7.3% in 1986 to 7.2% in 1987 in Alberta. Net exports of pork for Canada rose by 21% and exports of live hogs fell by 32% in 1987 compared to 1986. For Canada, 537 million pounds of pork were exported (after deducting imports) and 272,000 live pigs were exported in 1986. The net pork and live hogs exports amounted to about 33% of Canada's total production, as in 1986. Live hog exports from Alberta were estimated as 83,000 head or 4.3% of production. Most of Canada's pork exports (88%) and almost all of the live hogs exports went to the U.S. Because of health restrictions, few live hogs are imported into Canada.

The number of active hog operations in Alberta in 1987 was 5,591. The number of hogs marketed for slaughter in Alberta in 1987 were 1,944,271, an average of 348 per operation. On July 1, 1987, the Alberta breeding herd was reported to be 177,000 and on April 1, 1988, it was reported to be 187,000. Total pigs on farms in Alberta on April 1, 1988 was reported as 1,735,000, 10.1% above the previous year.

Alberta's share of Canada's pig inventory increased to 16.3% in 1988 as compared to 15.7% in 1987. This coincided with a decline from 65.1% to 63.4% for Eastern Canada's relative share, although total number of pigs on farms increased by 3.9% from January 1, 1987 to January 1, 1988 for Eastern Canada.

Average hog prices in Alberta were some $0.032 per kg in Alberta below that of the previous year in 1987 and ranged from $1.211/kg (week ending Dec. 25) to $2.065/kg (week ending June 26) in 1987 as weekly averages. The range (highest-lowest price) in weekly averages was $0.854/kg in 1987 compared to $0.805/kg in 1986. The Alberta average price in 1987 was $0.0700/kg below that of Toronto, in 1986 this spread was higher, at $0.0772/kg.

Weekly hog sales in Alberta by the Alberta Pork Producers marketing board ranged from 34,000 in July to about 45,700 in December in 1987, averaging 38,439 weekly.

The number of hogs slaughtered in Alberta in 1987 were 1,715,083 in federally inspected plants and 46,164 in provincially inspected plants, a total of 1,761,247, up 15.1% from 1986, and making up 12.4% of the Canadian total slaughter of 14,220,695 head. Average slaughter weight in Alberta was 172.2 lb. (78.1 kg) in 1987 compared to 171.9 lb. (78.0 kg) in 1986, and compared to the Canadian average of 174.6 lb (79.2 kg). In 1987, 1.66% of hogs graded in Alberta were sows, compared to 1.54% for Canada. The average market index for Alberta hogs was 102.8 in 1987.

The national tripartite stabilization program scheme for hogs provided protection from low prices to producers during the year. The following is a summary of the program by quarter:

QUARTER	PRODUCER PREMIUMS	NAT. AVERAGE PRICE		NAT. AVERAGE CASH COSTS		SUPPORT* LEVEL		PAYOUTS
	$ PER HOG	$/CKG	$/CWT	$/CKG	$/CWT	$/CKG	$/CWT	
Q1, 1987	3.70	159.65	72.42	97.17	44.08	141.01	63.96	None
Q2	3.30	185.97	84.36	95.40	43.27	142.10	64.46	None
Q3	3.30	199.73	90.60	96.58	43.81	158.17	71.74	None
Q4	3.30	152.78	69.30	95.77	43.44	145.23	65.88	None
Q1, 1988	3.00	139.11	63.10	95.81	43.46	143.05	64.89	3.94/ckg $3.14/hog

* 1987 Support level = national average cash costs plus 94% of the average difference between the national average price and national average cash costs in the same quarter for the past 5 years (i.e. 1982 through 1986).

* 1988 Support level is calculated similarly except that 93% is used instead of 94%.

At year's end, 3,170 Alberta producers were enrolled, about 25% of Canada's producer enrolment and hog production enrolled was about 85% of Alberta's total and 25% of the Canadian total. A payment of $3.14 per hog was determined for Q1, 1988, the first such under the program, amounting to $1.4 million for Alberta producers. The national fund for hogs was estimated at over $120 million at year's end prior to this payout, of which approximately $28 million is for the Alberta portion.

The Swine Artificial Insemination Program recorded an increase of 72% in fresh semen sales in fiscal year 1987/88, totalling 11,344 double doses, sold to 347 customers. The distribution of sales by use category, geographical location and year, are given in Table I. This shows also an 18% increase in number of customers, the addition of two customers using over 500 doses, and the doubling of the number of those using 100-500 doses each. This year, 443 doses of frozen semen were sold for export.

Reproductive performance from breedings with fresh semen was recorded as a 75% farrowing rate and 9.6 live piglets born per litter recorded on average.

During the year, 15 boars were removed from service for a variety of reasons, including loss of physical soundness, insufficient semen quality and, unsatisfactory performance of progeny. Nineteen (19) new boars were purchased, nine of which Agriculture Canada paid for through its Sire Loan Policy. The year end inventory of 27 consisted of 10 Yorkshire, 6 Landrace, 2 Lacombe, 5 Hampshire and 4 Duroc sires.

Twenty-two swine A.I. short courses were given across Western Canada. Attendance was about 400 people. Farm calls were made to demonstrate A.I. techniques and to provide advice on sow management to improve reproductive performance of sows. Enthusiasm for artificial breeding of sows is strong as illustrated by the fact that fresh semen sales for the year (87-88) exceeded that of the previous year by 73%.

TABLE I

FRESH SEMEN SALES DISTRIBUTION APRIL 1, 1986 TO MARCH 31, 1987

		TOTAL	USERS AND DOSES BY USE CATEGORY									
	TOTAL	# DOSES	1-25		26-50		51-100		101-500		500+	
	PURCHASERS	SOLD	USERS	DOSES	USERS	DOSES	USERS	DOSES	USERS	DOSES	USERS	DOSES
B.C.	74	4,353	50	271	9	296	6	418	8	1,472	1	1,896
ALTA.	209	5,636	160	1,252	22	812	14	967	12	1,668	1	937
SASK.	35	375	30	148	2	60	3	167				
MAN.	23	776	19	116	1	48	2	138	1	474		
NFDL.	1	189							1	189		
ONT.	2	8	2	8								
N.S.	1	2	1	2								
QUE.	2	5	2	5								
TOTAL												
87-88	347	11,344	264	1,802	34	1,216	25	1,690	22	3,803	2	2,833
86-87	294	6,609	236	1,551	30	1,095	17	1,215	11	2,748		
85-86	293	5,706	234	1,668	35	1,204	15	1,135	9	1,663		
84-85	290	5,164	227	1,664	35	1,166	23	1,235	5	1,069		

The Swine A.I. Advisory Committee met in October. The advisory committee recommended that options to acquire more boars be studied. A protocol for entry of A.I. boars relative to leptospirosis testing was approved.

The processing of sales records and field data and all invoicing have been computerized. Reports useful for management decision making are generated. Current emphasis is on acquisition of sufficient quality sires to meet the increasing semen demand.

In 1987/88, changes in the Alberta Swine Improvement Program that had been planned for some time started to occur. A major project started in March when Deloitte, Haskins & Sells Associates was selected as the consultant to perform a study to look at the future direction of performance testing (both home and station sow productivity program) as well as the A.I. program and the marketing of swine genetics domestically and abroad.

The study concluded that the Alberta Swine Breeders Association (ASBA) should take over operation of at least the Leduc test station since the federal government wished to privatize it and ASBA was the only body in a position to operate it. The study also recommended that ASBA consider forming a new body tentatively called the Alberta Swine Genetic Improvement Corporation to operate the test station and then the A.I. unit in the future if the test station experience proved positive. It was recommended that the Home (farm) Test Program be the responsibility of the the province until the other programs were functioning satisfactorily.

The province signed an agreement with the federal government in July to take over data entry for all performance testing (ROP) programs. The federal government supplied the hardware and programs and the provincial government supplied office space and data entry staff. Provincial staff started processing sow productivity data in November. In November and December, 1186 litters were entered. The performance data processing will follow in 1988.

Three quarterly issues of Estimated Breeding Values Reports (EBV's) for sires and dams were received from Ottawa, (March, September and November) and these were distributed to breeders and incorporated in the Home Test Report and Test Station Sale Notices.

The performance figures for the year show that backfat thickness and days of age to 90 kg continued to decrease on Home Test, which is the desired trend (Table II). Numbers tested on the farm were up at 19,147 in 1987 vs. 18,212 in 1986. The number of boars station tested increased slightly in spite of the much higher user fees instituted by Agriculture Canada in 1985. The number of breeders using home testing rose from 71 in 1986 to 80 in 1987 (Table III). These all indicate strong support for performance testing and use of tested breeding stock.

Tables II to VII provide a statistical summary of the swine improvement program, indicating activity and average results for the current and previous 5 years, breakdown by size of operation (activity level), by breed of boar and gilt, and by program in which the producer enrolled.

TABLE II

ALBERTA SWINE IMPROVEMENT PROGRAM
PERFORMANCE TESTING SUMMARY
1983 - 1987

Boars Station Tested	1983	1984	1985	1986	1987
Number	780	872	794	638	652
Avg. Backfat thickness (mm)	15.2	14.0	14.5	14.4	14.1
Avg. daily gain (kg)	0.93	0.91	0.92	0.91	0.90
Avg. feed conversion	2.46	2.45	2.41	2.48	2.47
Avg. age to 90 kg. (days)	148	144	145	144	145
Boars Home Tested					
Number	5,851	6,164	5,641	5,461	6,216
Avg. backfat thickness (mm)	13.9	14.1	14.3	13.8	13.3
Avg. age to 90 kg. (days)	159	157	157	155	154
TOTAL BOARS TESTED	6,631	7,036	6,435	6,035	6,868
Gilts Home Tested					
Number	11,809	12,004	12,474	11,651	12,931
Avg. backfat thickness (mm)	14.8	15.4	15.6	15.2	14.4
Avg. age to 90 kg. (days)	167	171	169	167	163
TOTAL PIGS TESTED	18,440	19,040	18,909	17,750	19,799

TABLE III

ALBERTA SWINE HOME TESTING ACTIVITY
1987 SUMMARY

Number of Pigs Tested Per Farm	Number of Breeders	% of Breeders	Total Number of Pigs	% of Pigs
20 or less	9	11	57	0.3
20-50	13	16	416	2.2
51-100	8	10	564	3.0
101-200	22	28	3,239	16.9
201-500	15	19	4,259	22.2
500 & over	13	16	10,612	55.4
TOTAL	80	100	19,147	100.0

TABLE III (a)

ALBERTA SWINE HOME TESTING ACTIVITY
1986 SUMMARY

Number of Pigs Tested Per Farm	Number of Breeders	% of Breeders	Total Number of Pigs	% of Pigs
20 or less	6	8	68	0.4
20-50	8	11	241	1.4
51-100	9	13	721	4.2
101-200	24	34	3,634	21.2
201-500	14	20	3,878	22.7
500 & over	10	14	8,570	50.1
TOTAL	71	100	17,112	100

TABLE IV

HOME TESTED BOARS - BY BREED

	1987			1986		
BREED	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)
Yorkshire	2,444	13.1	154	1,830	13.7	156
Landrace	879	13.4	150	685	14.3	153
Lacombe	406	14.1	149	349	14.1	157
Hampshire	356	12.8	162	300	13.2	164
Duroc	257	13.5	156	233	14.3	160
Crossbred	1,825	13.2	155	2,064	13.7	153
TOTAL:	6,216	13.3	154	5,461	13.8	155

TABLE V

HOME TESTED GILTS - BY BREED

	1986			1985		
BREED	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)	NUMBER TESTED	AVERAGE BACKFAT @ 90 kg (mm)	AVERAGE AGE @ 90 kg (days)
Yorkshire	3,018	14.1	161	2,762	14.9	164
Landrace	1,199	14.1	155	1,002	16.0	158
Lacombe	478	15.0	157	409	15.5	167
Hampshire	354	13.5	162	332	13.9	173
Duroc	173	14.6	156	178	15.5	160
Red Wattle	54	22.9	179			
Crossbred	7,655	14.5	165	6,968	15.2	169
TOTAL	12,931	14.4	163	11,651	15.2	167

TABLE VI

SOW PRODUCTIVITY AND MANAGEMENT PROGRAM
(Summary for 12 months ending December 31, 1987)

42 Active Herds

	YORKS	LAND	LAC	HAMP	DUROC	REDS	COMM	TOTAL
Litters Weaned	1,338	356	182	147	18	7	3,890	6,028
Pigs Weaned	11,717	3,237	1,506	1,094	154	51	35,259	53,018
Services/Farrowing	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.0
Farrowing Interval (Days)	165	161	170	167	156	191	155	158
Weaning to Conception (Days)	18.4	17.8	23.3	20.4	8.4	49.5	12.1	14.5
Total Born/Litter	10.8	10.8	9.9	9.5	10.7	8.9	10.5	10.6
Born Live/Litter	9.7	9.8	9.0	8.3	9.7	8.0	9.6	9.6
Pre-Wean Mortality (%)	10.5	10.8	10.5	9.5	14.0	21.6	10.3	10.4
Pigs Weaned/Litter	8.8	9.1	8.3	7.4	8.6	7.3	8.9	8.8
Litter/Sow/Year	2.2	2.3	2.1	2.2	2.3	1.9	9.4	2.3
Pigs Weaned Per Sow Per Year	19.4	20.9	17.4	16.3	19.8	13.9	21.4	20.2
Kg of Pigs at 21 Days Per Sow Per Year	110.9	122.4	102.1	96.8	110.9	66.3	125.5	118.9

REDS = Red Wattle

TABLE VII (a)

SEEDSTOCK FARMS - HOME TEST

49 Active Users

	BOARS			GILTS		
	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)
Yorkshire	2383	13.1	154	2899	14.0	161
Landrace	877	13.4	150	1198	14.1	155
Lacombe	406	14.1	149	478	15.0	157
Hampshire	347	12.8	162	344	13.6	162
Duroc	254	13.5	156	171	14.6	155
Red Wattle	6	15.2	167	6	17.2	179
Crossbred	1632	13.3	155	4344	14.6	163
Total	5905	13.3	154	9440	14.3	161

TABLE VII (b)

COMMERCIAL FARMS - HOME TEST

31 Active Users

	BOARS			GILTS		
	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)	NUMBER TESTED	AVERAGE BACKFAT (mm)	AVERAGE AGE (days)
Yorkshire	61	14.6	159	119	14.9	172
Landrace	2	16.0	162	1	11.4	146
Lacombe	-	-	-	-	-	-
Hampshire	9	12.5	150	10	11.4	167
Duroc	3	15.1	176	2	14.5	201
Red Wattle	43	21.1	177	48	23.6	179
Crossbred	193	12.8	156	3311	14.5	167
Total	311	14.3	160	3491	14.6	168
OVERALL TOTALS						
	6216	13.3	154	12,931	14.4	163

The Pork Industry Branch assisted Alberta's pork industry with production information. The Alberta Pork Production Handbook was distributed to over 1,800 producers, department staff, and interested parties on request. The Alberta Swine Record System was used by over 500 producers. A research review column written by Branch staff appeared in the quarterly Western Hog Journal, with a circulation of about 40,000. The Pork Production Home Study Course was updated and distributed on request, for a fee of $30 each to over 300 persons. Branch staff, regional specialists, the monogastric nutritionist, and the Swine Herd Health program supervisor have served as resource persons, and helped organize numerous local extension meetings, seminar and series courses throughout the province. Staff and specialists were involved in the planning and staging of the Alberta Pork Seminar (175 attending), the Alberta Pork Congress (about 3,500 attending), three regional swine breeding seminars (300 attending), meetings of the Alberta Swine Breeders Association, the Western Hog Growers Association, the Southern Alberta Hog Producers Association and the Alberta Pork Producer's Marketing Board district and annual meetings.

The swine specialists with district agriculturists helped conduct the Department's swine extension program. Numerous farm calls were made by the specialists. Information and advice were provided on financial planning, nutrition, engineering, herd health, and breeding, the A.I. and swine improvement programs were serviced, reports were provided for A.D.C., feed test results were followed up, ventilation problems were analyzed, planning visits and work with local veterinarians, feed company personnel, swine building engineers, regional economists, local district agriculturists were conducted. Groups of producers in production plus clubs use specialists as resources; office interviews and telephone interviews were a used as another means of communicating better production methodology.

For the Regional Specialist located in Lethbridge, A. George, serving Region 1 and the east part of region II, farm and office visits with clients have constituted a major portion of the work during this year. There has been an increasing demand on his time and expertise from all levels of producers within the two regional responsibilities and within other areas of the province. The work load in this area was almost doubled compared to last year. The cause was a general increase in hog production, and increased desire for specialized knowledge of management of new technologies such as electronic sow feeding and liquid feeding.

The specialist's HOGCAAF hog unit model spreadsheet has been a major extension tool used in working with clients and lending agencies. With HOGCAAF, advice on cash flows, production and debt servicing capabilities and a readily available and understandable format for the Ag-lender to determine loan viabilities and requirements can be provided. Work has been done with and on behalf of at least six lending agencies using this model. Seminars, lectures and courses with producers and students have had a major role in extension and have been well attended. Forty-three courses, seminars or classes were resourced with a total 1000 in attendance. Many more young and keen producers who realized that their operational viability does and will depend on sound practical management have been attending.

Attitudes about potential goals have changed greatly over the last five years. The potential of 22-24 pigs per sow per year has been accepted by many young producers as being very achievable.

A much more sophisticated approach to record keeping, both with production records and financial records has become evident. The Alberta Swine Record Keeping System was in demand and refills and new packages were supplied on a regular basis to producers all over the province. The PIGCHAMP record system, was used in a demonstration capacity.

Liaison with District Agriculturists has been ongoing and fruitful with farm visits, demonstrations and seminars in many districts. Swine producer discussion groups were active in Oyen and Medicine Hat. Picture Butte and/or Lethbridge were also areas under discussion for a group. Lectures and courses were resourced at both Olds College and Lethbridge Community College. A growing awareness among Ag students of the potentials and needs of the swine industry was evident.

A tour of U.K. swine units with producers and their wives from Alberta and B.C. proved an outstanding success. All came home with new ideas and enthusiasms and several have already made major changes to their operations.

The Regional Swine Specialist located in Red Deer, Marvin Salomons, had responsibilities this year that included 1.5 months serving in regions 5 and 6; 4.5 months serving in regions 5 and 6 as well as the west part of region 2 and all of region 3, and 5 months serving part of region 2 and all of region 3.

Activities included conducting approximately 55 farm calls, 248 office interviews and approximately 650 telephone calls from producers on all aspects of hog production, economics, management, nutrition, buildings, etc. Many of these calls were made in conjunction with other regional specialists, district agriculturists and swine industry veterinarians and service personnel. The specialist assisted these latter groups by providing technical and production information as required.

ADC, FCC and other lending agencies were assisted with 25 client loan evaluations, farm and office calls evaluate swine units and proposals. The specialist assisted in the organization and resourcing of approximately 12 extension meetings for hog producers (approximately 600 attending).

A series of eight monthly newsletters (from October, 1987 to May, 1988) entitled "Beef 'n' Bacon" were written and edited (18 articles). These were mailed either directly or through District Agriculturists' offices to approximately 4,000 swine and beef producers, veterinarians, etc. in Regions III and V and to feed manufacturers and agriculture agencies throughout the province. Many follow-up contacts have been made as a direct result of articles appearing in Beef 'n' Bacon.

The specialist wrote and edited (20 articles) a newsletter entitled "Pig Pointers", mailed to approximately 300 swine producers, veterinarians, feed manufacturers, District Agriculturists' offices, etc. in Region VI. The "Research Reviews" column for the Western Hog Journal was coordinated and 10 research reviews on various topics were written for the column over the past year.

The specialist assisted in the planning and promotion of the June, 1987 Alberta Pork Congress held in Red Deer (3,000 producers attending), made a presentation at 1987 Congress and as of September, 1987 became actively involved in the planning and promotion of the 1988 Congress. He acted as a Director (ex-officio) on the Board and is a member of the education committee.

The specialist assisted in the planning and promotion of the January, 1988 Banff Pork Seminar, made a presentation at the 1988 seminar and is currently Chairman of 1989 Planning Committee. The specialist revised Chapter 4 - Feeding & Management of the Pork Production Home Study Course.

The Green Certificate program was assisted with courses, trainee discussions, level I and II testing and the planning and resourcing of two two-day courses for trainees at Olds College (March, 1988). A series of three Pig Breeding Seminars at Barrhead, Red Deer, and Lethbridge in January, 1988 were organized.

The University of Alberta swine production class (Animal Science 470) was assisted with an in-depth analysis of local farms. A livestock update session for specialists and District Agriculturists at the Lacombe Research Station was organized with the regional livestock specialist. Several other responsibilities, including branch programs, swine record system, a specialist task force to Field Application Computer Group, and on-farm demonstration activities made a part of this year's work.

The Regional Swine Specialist in Vermilion, R. Bazylo, held eleven seminars or short courses dealing with breeding management, nutrition and record keeping during the year. These focus areas were tied into financial management aspects whenever possible.

From April 1, 1987 to March 31, 1988, a total of 51 farm calls and 1073 office interviews (clients visiting or phoning the office were carried out. District seminars or courses were held in Two Hills (2), Lloydminster, Provost, Bonnyville, Vermilion, Smoky Lake, St. Vincent, and Tofield (2). Attendance was quite good for most of these. A basic nutrition course at Olds College was resourced. A.I. courses were carried out at Vermilion and Tofield. Three on-farm demonstrations were initiated including the wet nurser, hand breeding versus pen mating, and the evaluation of the life-line system. An evaluation of the PIGCHAMP record program was completed and the other specialists were provided copies of the program. Two herds were on the program.

A tour for about 35 Lloydminster and Vermilion producers to the O. S. Longman Building and the University of Alberta Research Barn was conducted. During the past year, the specialist evaluated or gave information for 17 AADC or other banking institutions' loan proposals.

The specialist worked with the Green Certificate Program, testing students for the program on two occasions.

The revised Home Study Course was proofread and completed. An article on breeding management was written for the Western Hog Journal and a factsheet on marketing was authored. A pamphlet entitled INFORMATION SOURCES AND PROGRAMS AVAILABLE TO ALBERTA PORK PRODUCERS was completed. Many inquiries were received on buildings, rations, management, etc. Veterinary contacts increased over the past year.

The new Swine Specialist for Region V & VI, B. Dening, began on November 12, 1987. Five articles were written for the Nov-March (5 issues) of "Beef 'n' Bacon". "Beef 'n' Bacon" is mailed either directly or through D.A. offices to 2500 swine and beef producers, veterinarians and industry people in the region. A newsletter entitled "Pig Pointers" for swine producers, D.A.'s and industry people in Region VI was edited. Four hundred and thirty-five (435) copies of "Pig Pointers" was sent to Region VI in May, 1987 and February, 1988. The specialist assisted in planning and promoting major swine breeding seminars held at three locations in Alberta, featuring Dr. Paul Hemsworth from Australia.

The specialist spoke at 4 seminars and had 11 farm calls in Region VI and assisted in organizing and resourcing 5 extension meetings for swine producers in Region V. He conducted 38 farm calls, 33 office interviews, 50 telephone calls and sent out 29 letters to hog producers in Region V; and conducted 11 farm calls, one office interview, 29 telephone calls and sent out four letters to producers in Region VI. ADC was assisted in evaluating proposals for new and existing hog operations. Various related conferences, seminars and industry meetings were attended.

POULTRY BRANCH

General Conditions

Nineteen eighty-seven was a relatively stable year for the poultry industry. The egg, broiler breeder and turkey sectors continued to operate within a national agency.

The chicken board continues to operate under the chicken national agency (C.C.M.A.) guidelines, but do not have voting status as they are not members of the agency.

Feed grain prices continue at the lows established late in 1986. The corn embargo was decreased from $1.10 to 30 cents per bushel, but the least price formulation is in favor of wheat rations by up to 15%. Producer margins, in most sectors, continue at levels near the 1986 high maximums. In late 1987, the broiler price was under pressure. A drop of 13 cents per Kg has since recovered 6 cents per Kg.

The quota base increases in chicken and turkeys started in 1986 are now in production. The chicken quota base approximates 4.5 million square feet, a 10% increase over 1985. The turkey quota base approximates 8.2 million Kg of heavies and 2.1 million Kg of lights. Five new broiler quotas and three new turkey quotas will be put in place in 1988. The broiler breeder quota remains at 95%. The egg board are facing the necessity of further quota cutbacks due to the presence of excess product in the Canadian market.

The move to make quotas saleable for the various poultry commodities progressed somewhat during the year. The broiler breeder board have approved the sale and transfer of quota without property. When quotas become readily saleable without property there will be some realignment within the industry.

Broiler Breeders

Setting of hatching eggs in 1987 increased by 11% to 51.3 million eggs. During the year 98.5% of the eggs set for broiler production were produced in Alberta. Alberta brought in 1,280,000 eggs and shipped 816,000 commercial chicks outside the province. Three hundred and eighty seven thousand female breeder chicks were imported from the U.S.A., an increase of 8%. Average hatchability was 77.5%.

Eggs

The 1987 laying flock of 1,931,600 layers was 1,503,600 regulated and 428,000 unregulated layers. This number is the same as in 1986 as reported by the Alberta Egg Marketing Board.

The production of eggs from Alberta during this period was 38,124,000 dozen, the same as last year. The rate of lay is 21 dozen for hens in regulated, and 15.3 dozen for hens in unregulated flocks. The net movement of eggs into the province showed an increase of 0.48% for a total of 8,948,000 dozen or 172,077 dozen per week to accommodate the market demand for Alberta. The opening of a new retail food chain in the Edmonton area in 1985 changed the marketing patterns of eggs and poultry products, and it is still taking some time before the Alberta trade adjusts.

The Canadian Egg Marketing Agency Buy Back Program saw an increase of eggs from Alberta in 1987; 3,765,975 dozen in 1986 compared to 4,548,555 dozen in 1987. The Alberta per capita consumption was 20.8 dozen.

The commercial egg marketings through registered egg stations were 34.7 mln dozen in 1987, compared to 34.9 in 1985, a 0.7% decrease.

Broilers

Alberta's chicken production in 1987 was 39.2 mln Kg, 0.5 percent below production a year ago.

Broiler production at 36.3 mln Kg was up 2.0 percent from 1986. Roaster production was 2.7 mln Kg, down 1.0 percent, while cornish was up 12.0 percent, at 2.2 mln Kg.

Broiler production enjoyed a strong market early in the year, but came under considerable pressure at year end.

The Chicken Board implemented the first stage of a modern cost effective quota system whereby roaster and broiler quota are combined, thus allowing growers to reduce production costs by growing light and heavy birds in the same barns.

A change to fresh product for most retail stores has affected the method of handling chicken and the need for storage. More pressure has been placed on the processing industry to have product available on a regular basis.

The Alberta Chicken Producers Marketing Board voted once again not to join the National Chicken Agency, however, the Board did sign their fifth agreement with the Agency, which limited Alberta's marketing to 8.25% of the total Canadian allocation in 1987.

Turkey

Heavy breed marketing increased 14.7% to 8.7 mln Kg. Light breed production increased to 1.7 mln Kg; a decrease of 2.4 percent from 1986.

The movement of turkey into the province was down 25% to 1.33 mln Kg. Marketing figures indicate a significant increase in demand for heavy breed turkeys at the expense of light breed turkeys, because of increasing sales of fresh turkey parts (from hens) in a value added premium market.

Domestic production of turkeys in Canada showed an increase of 6.6% over 1986 levels.

Alberta's total turkey marketing allocation from the Canadian Turkey Marketing Agency for 1987 was 9,699,000 kilograms. Actual marketings were 9,675,000 mln Kg.

Alberta's per capita consumption of turkey meat was 4.34 Kg; 3.60 Kg for heavies and 0.74 Kg for lights.

Branch Programs

Administration - To develop and administer regulations, policies and programs relative to the industry under the Livestock and Livestock Products Act.

Poultry Branch programs were related to increasing poultry production, improving efficiency, and thus farm income, and keeping poultry products competitive with other protein sources.

Research

The Poultry Branch continued to assist in the functioning of the University of Alberta research institute by serving on the poultry research committee. As part of a five-year agreement, the Poultry Branch provided funding of $370,000 for applied research to be conducted at the University of Alberta poultry unit. Branch staff were also involved in a number of on-farm demonstrations and research projects related to poultry production conducted under the auspices of the Farming for the Future Program.

Poultry Health - To prevent and control poultry diseases, to safeguard public health.

All breeder flocks and hatcheries were monitored with emphasis on salmonella detection and reduction in cooperation with the Animal Health Division. This program is designed to increase agriculture production by reducing the number and kinds of disease producing organisms in poultry and their environment with emphasis on salmonella, because of the public health significance of this organism. The resultant increase in production has led to improved income for poultry producers of this province.

The Poultry Health Program is broken down into a number of areas. These are:

1. Hatchery Sanitation Program (Fluff Sampling)

Chick fluff samples analyzed were 76 from the Lethbridge area; 234 from the Calgary area; and 268 from the Edmonton area. The number of chicken flocks represented by fluff samples totalled 1,243 indicating a monitoring sampling of 11.7 times for each approved hatchery supply flock. The turkey flock sampling totalled 45 indicating approximately nine fluff samples per flock approved.

Fluff sampling of hatcheries was considered excellent.

The following table gives a complete summary of this program and lists the salmonella isolations which were found in the samples:

Total Number of Tests	Salmonella Isolated
Chicks 578	S. nienstedten (2)
Turkeys 45	S. typhimurium
TOTAL 623	S. (not typed)
	S. anatum

% S. isolations (chickens)	1983	1984	1985	1986	1987
	1.43(8)	0.96(7)	0.82(6)	0.98(6)	1.04(6)

% S. isolations (turkeys)	1983	1984	1985	1986	1987
	2.38(1)	6.38(3)	2.50(1)	0.00(0)	8.89(4)

2. Chicken Health Program

The Poultry Branch staff worked with all hatching egg shippers with special emphasis on individuals who had salmonella isolations. The following table gives the laboratory submissions for the year. The table shows the laboratory workloads for this program of the Animal Health Division and the activities of the Poultry Branch.

Table 1

	Flock Placements			Type of Submissions			
Territory	Broiler	Egg-Type	Total	Rep	Lay	1st Hatch	Total
1 (Leth. Lab)	25	-	21	24	20	16	60
2 (Calg. Lab)	20	7	27	24	31	25	80
3 (Edm. Lab)	31	-	31	25	27	31	73
4 (Edm. Lab)	20	22	42	17	28	38	83
TOTAL	96	29	121	90	106	110	296

By studying Table 1, health related activities of the Poultry Branch can be noted. Required calls within the Poultry Health Program by regional poultry specialists are very satisfactory.

It is encouraging to note that only four submissions of salmonella were isolated from culls first hatch. In 1986, the branch implemented a new egg sanitation program with the aid of Rodac plate monitoring at the farm level. The use of paraformaldehyde flakes in the nest boxes, and the spraying of eggs with disinfectants immediately after lay are the main emphasis employed by regional poultry specialists with some of their hatching egg producers. The new program, with constant vigilance is resulting in reducing the number of salmonallae in commercial chicks.

Table 2 Percent Chicken Salmonella Isolations

	Replacement	Sampling Laying	1st Hatch	Total
No. of submissions	90	106	110	296
No. of S. positives (+)	3	25	4	32
% positive -1987	3.3	23.6	3.6	10.8
-1986	0.0	29.6	0.0	13.0
-1985	2.8	26.3	4.0	11.6
-1984	10.1	24.8	7.4	14.5
* 1978	15.8	27.8	0.8	21.2

* start of program

The constant percent isolation of salmonella in environmental samples at time of lay continues to be a concern. At the hatchery and egg producer level increased egg sanitation and management is being encouraged and monitored by the use of Rodac plates.

With the rise of the hatching egg producer chick placement quota from 85% to 95%, increased egg sanitation and constant vigilance is essential by both the producer and regional poultry specialist. Greater emphasis on flock health and egg quality is essential to maintain a high degree of chicken quality.

3. Turkey Health Program

	Flock Placements		Type of Submission		Hatches					Total
Terr.	Heavies	Lights	Rep.	Laying	1	2	3	4	5	
1	-	-	-	-	-	-	-	-	-	-
2	3	-	-	3	1	1	1	-	-	6
3	2	-	-	2	1	2	2	-	-	7
4	2	-	-	2	1	1	1	3	2	10
TOTAL	7	-	-	7	3	4	4	3	2	23

Throughout the year, turkey breeders co-operated in various Mycoplasma testing programs. S. arizonae was isolated in cull poults from three hatches in two heavy breeder flocks. Three heavy-type breeder flocks were placed in Alberta for out-of-the-province egg and poult sales.

4. Hatching Egg Supply Flock Approval

The number of birds under this program has changed very little in the past couple of years, with the exception of egg-type flock placement.

Chickens (Approved)

	No. of Flocks		Average Flock Size		No. of Birds	
Year	Egg	Broiler	Egg	Broiler	Egg	Broiler
1987	26	88	1524	3806	39,631	344,967
1986	48	108	1165	3192	55,931	344,738
1985	32	90	1739	3556	55,648	320,073
1984	29	94	1988	3412	57,653	320,811
1983	27	90	1976	4040	53,345	363,616

Turkeys (Approved)

			Average Flock Size		No. of Birds	
Year	Lights	Heavies	Lights	Heavies	Lights	Heavies
1987	-	4	-	4,087	-	16,349
1986	-	5	-	5,190	-	25,949
1985	-	3	-	6,150	-	18,450
1984	-	4	-	4,600	-	18,400
1983	-	2	-	6,900	-	13,800

General

1. Poultry

Twenty four permits for a total of 37,035 pheasant chicks were submitted. Three for 104,000 broiler chicks were received.

Twelve (12) I.L.T. disease outbreaks were diagnosed throughout Alberta by the Regional Veterinary Laboratories. Producers were visited by the regional poultry specialists and advised on how to deal with such disease situations.

The I.L.T. Advisory Committee met during the latter part of the year. Briefs were heard concerning the total relaxation of the I.L.T. regulations. These industry concerns are now being addressed by the committee.

2. Rabbits

Rabbit extension information packages were mailed to 147 enquiries. Seven individual calls were made to rabbit raisers for various reasons.

Processing figures indicate approximately 11,500 rabbits, mostly fryers, were slaughtered in Alberta in 1987. This figure indicates an decrease of approximately 4,000. Interest in raising rabbits throughout Alberta comes and goes.

3. Economic Studies

There is a continual demand for factual and updated information on costs of production.

A fair amount of time was spent with farmers reviewing and assisting with loan applications. Loan applications come from A.D.C., F.C.C., and many of the banks asking for reviews and comments.

During this period, the Branch developed cost of production models for shell eggs, broiler chicken, turkeys and broiler breeders. These models are continually updated with current data and cost of production information is used to deal with requests in the area of economics.

A number of poultry farms were sold during the year and staff reviewed loan applications and worked with a number of parties before properties were finally sold.

4. Extension

The Branch's role in extension is to interpret and impart to the industry and to the general public, technical, scientific, economic and general information on poultry production. Throughout the year, regional staff members made 750 farm and service calls, 360 poultry health program calls, handled 260 office extension enquiries, plus 272 calls to the allied trade. They attended 230 meetings including both industry and departmental.

Branch staff continue to work with a wide range of producers varying from large commercial farms to acreage holders with a few birds. Staff spoke at meetings varying from the specialized Agriculture Lender's Workshop to the small flock seminars and country fairs.

In February/March 1987, the Poultry Industry Conference was again held in Red Deer. The Egg Marketing Board, the Hatching Egg Board and the Turkey Marketing Board all held their annual meetings and the Chicken Marketing Board held an information meeting in connection with the Conference. There was a very impressive area of displays set up in conjunction with the Conference. The Poultry Servicemen's Workshop held at Lake Louise in September, again drew good attendance and good comment. Major poultry shows were held at Calgary, Edmonton and Lloydminster.

Commercial Egg Production and Marketing

Year	Layer (Average/month)	Total Eggs Dozen (Average Per Month)	Reg. Stations 15 doz. boxes	Producer Av. Wt. Price
1987	1,931,600	3,177,000	2,329,000	88.9
1986	1,931,600	3,177,000	2,330,000	91.2

Poultry Eviscerated in Registered Stations

Chicken (Kilograms)

Year	Under 1 Kg	1-2 Kg	Over 2 Kg	Total
1987	2,245,000	36,327,000	2,718,000	41,290,000
1986	2,005,000	35,626,000	2,224,000	39,855,000

Turkey (Kilograms)

Year	Under 5 Kg	5-8 Kg	Over 8 Kg	Mature	Total
1987	1,713,000	4,268,000	4,463,000	166,000	10,611,000
1986	1,673,000	3,827,000	3,788,000	133,000	9,421,000

Chick and Poultry Placement by Type

	1987	1986
* Egg Production	2,222,000	2,373,000
Broiler Chickens	35,608,000	31,566,000

	1987	1986
Broiler Turkeys	259,000	361,000
Heavy Turkeys	1,476,000	1,222,000

* females only

Ducks, Geese and Pheasants Killed at Alberta Inspected Plants

	1987 (Head)	1986
Ducks	33,716	21,000
Geese	21,142	20,000
Pheasants	23,038	24,000

Licensing

Year	First Receivers	Reg. Egg Grading Stations	Reg. Poultry Stations	Egg Packing Stations	Buy & Sell Rejects	Hatcheries	Custom Killing Stations
1984	3	20	10	3	26	11	1
1985	2	17	9	1	28	13	1
1986	2	17	9	2	32	13	3
1987	2	14	11	0	34	12	2

Farm Cash Receipts $

	1987	1986
Eggs	47,000,000	47,000,000
Poultry	84,000,000	86,000,000
	131,000,000	133,000,000

REGULATORY SERVICES AND FEEDER ASSOCIATIONS BRANCH

This Branch was responsible for the administration of certain Acts and their respective Regulations.

This regulatory function provides a protection service for livestock producers in the following areas:

- Brand inspection services
- Brand registration
- Licensing and bonding of livestock dealers and agents
- Licensing of stockyards and stockyard operators
- Provide for protection of land and agricultural products from livestock running at large
- Conducting investigations of fraudulent trade practices in livestock trading
- Check scales and equipment used in making railgrade settlements on cattle

The Feeder Associations Guarantee Act enables members of feeder associations to acquire financing for the growing and finishing of livestock.

BRAND RECORDING SUMMARY

	Cattle	Horses	Sheep	Total
New Brands Issued	1,605	396	0	2,001
Transfers	681	80	0	761
Certified Extracts	0	0	0	0
Cancelled Brands	683	127	0	810
Brands Renewed	8,998	1,462	0	10,460
Brands Re-issued	95	14	0	109

The number of brands in good standing at December 31, 1987 was 53,983.

Cattle	46,161
Horses	7,811
Sheep	11

During this period, 817 cattle, 179 horses and one sheep brand was allowed to expire as of March 31, 1987. Final brand notices were prepared and mailed to brand owners who had not renewed and these totals were 2,520 cattle, 509 horses and four sheep brands. In addition, 11,319 cattle, 1,860 horse and four sheep brand renewal notices were received from Computer Services in early September and processed by the Stettler office before month end.

During the year, a total of 54 livestock auction markets and 52 livestock assembly stations were in operation. In addition, 14 markets were licensed permitting them to hold 5 sales or less during the calendar year, three markets were licensed permitting them to hold 9 sales or less during the calendar year, one market was licensed permitting them to hold two sales or less during the year, and four markets were licensed permitting them to hold a one-day sale only.

A total of 3,173,565 head of livestock were brand inspected. This was an increase of 174,155 head from the previous year.

Summary of Kinds of Livestock Marketed for Five Year Period

	1987	1986	1985	1984	1983
Steers	1,143,455	1,046,552	1,009,742	1,073,745	1,064,912
Heifers	805,810	805,942	816,068	829,956	826,477
Cows	366,060	328,124	403,559	410,945	359,595
Calves	543,988	499,327	547,811	527,733	476,268
Bulls	76,250	71,475	86,102	88,441	80,932
Yearlings	177,318	197,170	215,113	209,489	196,573
Buffalo	70	215	140	135	0
Mares	23,494	21,074	16,999	16,318	15,279
Geldings	19,562	17,598	14,401	15,391	15,203
Fillies	4,250	3,350	2,952	2,644	2,650
Stallions	5,600	4,315	3,652	3,985	4,138
Colts	7,426	3,994	3,648	3,169	2,488
Mules	282	279	256	202	150
TOTALS	3,173,565	2,999,410	3,120,443	3,182,153	3,044,665

Comparison of Branded Livestock Inspected for Last Five Years

	1987	1986	1985	1984	1983
Branded Livestock	75.4%	75.1%	73.6%	74.7%	74.7%
Livestock Not Branded	24.6%	24.9%	26.4%	25.3%	25.3%

Summary of Inspections

Year	Auction Markets	%	Packing Plants	%	Other Inspection	%
1987	1,903,416	60.0	916,486	28.9	353,663	11.1
1986	1,785,025	59.5	874,471	29.2	339,914	11.3
1985	1,885,912	60.4	962,585	30.9	271,946	8.7
1984	1,920,531	60.4	993,561	31.2	268,061	8.4
1983	1,802,681	59.2	1,035,047	34.0	206,937	6.8

Permanent Brand Inspectors

	# of Inspectors		Livestock Inspected		Lstk. Insp. Per Man	
Location	1987	1986	1987	1986	1987	1986
Brooks	2.82	2.80	268,823	231,339	95,327	82,621
Calgary	5.00	5.84	362,880	349,465	72,576	59,839
Clyde	2.16	2.36	184,288	156,852	85,319	66,462
Edmonton	8.00	8.00	318,240	305,721	39,780	38,215
Grande Prairie	2.19	2.14	57,266	55,159	26,149	25,775
Hardisty	1.45	1.43	105,822	103,660	72,981	72,489
High River	1.07	1.17	80,068	83,004	74,830	70,943
Lethbridge	5.78	6.55	434,247	403,162	75,129	61,551
Lloydminster	1.00	1.00	90,312	93,118	90,312	93,118
Medicine Hat	1.44	1.50	67,010	69,597	46,535	46,398
Ponoka	2.65	2.79	178,954	176,862	67,530	63,391
Red Deer	5.21	5.15	342,716	322,898	65,780	62,698
Strathmore	1.00	1.00	90,853	89,992	90,853	89,992

During 1987, our brand inspection staff questioned 153,675 head of livestock for bills of sale and held the proceeds on another 33,205 head pending proof of ownership. The proceeds on 11,137 head were released to others than the contributor.

Investigations in 1987 resulted in requests for computer retrievals on brand information and as a result, 355 names and 1,337 brands were pulled.

Cattle Exports - 1987

Month	B.C	Sask.	Man.	Ont.	Que.	USA	Others	Total
Jan.	819	5,559	478	7,637	856	5,336	30	20,715
Feb.	2,587	5,692	616	10,763	82	12,118	2	31,860
Mar.	1,924	4,829	115	11,620	40	11,777	8	30,313
Apr.	2,302	4,402	48	8,400	72	15,382	80	30,686
May	3,697	2,707	136	5,871	286	16,329	2	29,028
June	2,176	3,079	238	7,516	232	24,650	71	37,962
July	2,393	2,855	170	7,696	176	8,400	94	21,784
Aug.	1,838	2,781	320	6,654	-	6,928	111	18,632
Sept.	1,571	3,589	61	3,829	127	1,937	37	11,151
Oct.	2,954	6,103	129	11,573	325	3,977	126	25,187
Nov.	3,151	7,803	207	16,656	16	5,523	90	33,446
Dec.	2,692	4,977	692	5,260	235	8,315	458	22,629
1987	28,104	54,376	3,210	103,475	2,447	120,672	1,109	313,393
1986	27,947	58,046	9,202	132,228	6,080	117,486	204	351,193

During 1987, 561 missing or stolen cattle reports were received. Following is a summary of these reports for the last four years.

Missing or Stolen Cattle Reports

	1987	1986	1985	1984
Total Number of Report	561	471	496	498
No. of Head Reported Missing or Stolen	1,128	1,079	1,471	1,303
No. Found	310	355	329	373
No. not Found	818	724	1,142	930

Under the Stray Animals Act, 772 head of livestock were impounded during the year. A total of 631 head were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The balance of 141 head were sold by public auction and the net proceeds after costs were deposited into general revenue.

There were 961 livestock dealers and agents licensed during 1987 compared to 930 the previous year. Eight claims were received against two livestock dealers' bonds during the year.

Six branding demonstrations were conducted in various parts of the province with good local participation.

Feeder Associations in Alberta

1986-87

During the year, 48 feeder associations operated under the Feeder Associations Guarantee Act.

During the fiscal year, $105,511,243.81 worth of credit was used to purchase 188,453 cattle and 5,223 sheep. The amount outstanding as of August 31, 1987 was $48,737,257.00.

Corresponding figures from one year ago are 135,352 cattle and 3,903 sheep purchased for a total cost of $64,278,780.70 worth of credit. The amount outstanding as of August 31, 1986 was $29,854,330.61.

In the fall of 1986, approval was granted by Order-in-Council for Moose Mountain Feeder Co-op Association (Elk Point), Paintearth Feeder's Association Cooperative Ltd. (Castor) and Stettler Feeders Co-op Ltd. (Stettler) to commence operations.

In the winter of 1987, approval was granted by Order-in-Council for Highway 9 Feeder Co-op Association (Hanna), Ridge Feeders Co-op Ltd. (Raymond) and Wainwright Feeders' Association Co-op Ltd. (Wainwright) to commence operations.

In the spring of 1987, approval was granted by Order-in-Council for Harmon Valley Co-op Feeders Association Ltd. (Nampa), Provost and District Co-operative Feeders Association (Provost), Fort Feeders Co-op Assoc. (Fort Saskatchewan) and Thorsby Feeder Co-op Association (Thorsby) to commence operations.

On July, 1987, an Order-in-Council was approved which amended the Feeder Associations Guarantee Regulation. The most significant change involved increasing the loan limits of the individual members of each association and with the contraction of time in which an individual member can reach the maximum loan limit. The change in the Feeder Associations Guarantee Regulation allows new members to borrow up to $30,000.00 and allows experienced members to borrow up to $75,000.00.

Other changes were made to improve the supervision of the feeder associations. These include the increased bonding for all signing authorities from $50,000 to $75,000. As well, each board of directors of each feeder association is to meet a minimum of four times per year. The supervisors of the individual feeder associations are to fill out an inspection report which outlines the feeder member's facilities, health of the animals and identification of the animals (cattle are branded). The amended regulations also gave some clarification for custom feeding situations and a program for feeding slaughter cows.

The old reporting system of sales of livestock that was done by the secretary-treasurers was replaced with a monthly statement issued from the banks/branches which shows adjusted inventory of each feeder member.

The total Order-in-Council limit for all feeder associations as of August 31, 1987 was $95,400,000.

In the summer of 1987, the administrative responsibilities of the Feeder Association Program were transferred from the Regulatory Services and Feeder Associations Branch to the Horse Industry Branch. Doug Milligan is the Head of the Feeder Associations.

1986/87 Feeder Association Year End Report

Association	Cattle	Sheep	Total Credit
Acme	4,594		2,741,404.28
Andrew	1,710		849,053.61
Barrhead	5,241		3,076,175.42
Bashaw	1,446		749,141.56
Battle River	9,223		5,270,307.89
Big Valley	3,459		1,649,026.28
Blindman	16,423		8,980,326.48
Bonnyville	1,318		761,053.37
Bowden	7,153		4,093,938.88
Brooks	3,268		1,774,334.97
Carstairs	2,619		1,419,261.34
Colinton	2,121		1,024,543.55
Delburne	2,696		1,512,069.76
East Olds	7,809		4,460,160.03
Flagstaff	7,788		4,750,902.25
Fort	172		116,430.39
Fort Macleod	1,827		1,057,446.81
Glenwood	3,640		1,897,284.97
Grande Prairie	2,195	173	1,109,091.49
Great West	1,675		826,642.19
Hardisty	9,046		5,047,014.45
Harmon Valley	392		234,970.44
Highway 9	1,394		963,669.79
Innisfail	1,662		956,270.18

Association	Cattle	Sheep	Total Credit
Lakeland	1,619		911,865.66
Little Bow	5,977		3,313,162.16
Mannville	2,590		1,311,477.85
Marwayne	8,257		4,977,025.05
McLeod River	279		178,817.81
Moose Mountain	303		170,374.46
North Peace	3,791	110	1,815,223.15
Paddle River	2,859		1,566,006.21
Paintearth	1,388		683,158.30
Parkland Stavely	5,357		2,912,325.13
Pincher Creek	3,025	72	1,713,369.32
Ponoka	10,444		5,557,307.25
Prairie River	2,912		1,484,877.09
Provost	-	-	-
Raven	5,447		3,190,517.99
Red Deer	16,349	4,531	9,778,511.96
Ridge	1,370		813,919.08
Rockyford	3,278		1,903,562.08
South Eastern	688		321,975.52
St. Paul	2,420		1,301,740.58
Stettler	1,104		680,812.24
Thorsby	214		130,101.44
Wainwright	105		671,490.73
Westlock	9,806	337	4,803,102.37
Total 86-87	188,453	5,223	105,511,243.81
Total 85-86	135,352	3,903	64,278,780,70

SUMMARY OF FEEDER ASSOCIATION OPERATIONS

1982-1987

Feeding Season	No. of Assoc.	Cattle	Sheep	Amount of Credit
1982-83	33	75,917	5,895	32,585,619
1983-84	37	91,497	4,517	39,626,822
1984-85	36	98,287	5,255	43,699,556
1985-86	38	135,352	3,903	64,278,781
1986-87	48	188,453	5,223	105,511,243

Staff Changes

Several staff changes took place within the branch during the year. Les Halmrast, George Dionne, Art Hopp, George Thomson, Jim MacKinnon and Glenn Kleeberger took advantage of the early retirement program and retired. Don Garriock was transferred to Lethbridge. Noel Flaade and Lawrence Zeigler resigned. Cliff Harrish, Tom Crowe, Eric Breadner, Brian Braun, Dale Christman, Wayne Jensen, Randy Schmidt and Joe Audet joined our staff as Livestock Inspection Officers in various locations throughout the province. Bernie Welch, who was on long term disability, returned to his former position. Bill Herbert, who was acting branch head, was appointed Branch Head.

ALBERTA CROW BENEFIT OFFSET PROGRAM

The Alberta Crow Benefit Offset Program (ACBOP) was initiated on July 1, 1987, replacing the Alberta Feed Grain Market Adjustment Program (AFGMAP). The purposes of the two programs were identical: to offset the distortion in feed grain prices created by the present federal Crow Benefit payment to the railroads. Although the distortion in feed grain prices was estimated at $18.00 per tonne, payments under the AFGMAP and ACBOP from April 1, 1987 to June 30, 1987 and July 1, 1987 to March 31, 1988 were $21.00 and $13.00 per tonne, respectively.

In addition to the changes in name and in payment per tonne, the claim procedures under the farm fed option were simplified by including the use of a statutory declaration to clarify eligibility of grain and allow farmers to claim for grain fed up to an allowable limit. To lessen the inconvenience to grain farmers under the Alberta Crow Benefit Offset Program, elevator companies, feed mills and licensed grain dealers were allowed to "cash" certificates they had issued.

AFGMAP registrants were transferred to the ACBOP on July 1, 1987. Feed users (livestock producers) were registered on either the certificate option, the farm fed option, or both - depending on the source of the feed grain which they used. Certificate option registrants were given certificates for use when purchasing eligible feed grain. The certificates were valued at $13.00 per tonne of feed grain. Farm Fed registrants claimed benefit of $13.00 per tonne of home grown grain which had been fed to livestock.

Feed Sellers who received certificates as partial payment for feed grain were either grain producers or merchants. Feed grain producers presented the certificates to Alberta Agriculture for reimbursement of $13.00 per tonne of feed grain sold. Feed grain merchants were not permitted, except in certain circumstances, to present certificates for reimbursement. Instead, they were required to match the aggregate tonnage of eligible feed grain purchased and aggregate tonnage sold, within an approved float.

REGISTRATIONS

A. Feed Grain Users

A total of 26,155 feed users were registered on the program as at March 31, 1988. This was a net increase of 1,040 from the previous year. The number of feed users registered under the certificate, farm fed, and both options were 6,733, 11,084, and 8,338, respectively. The following table compares the number of registrants as at March 31, 1988 with previous years:

Option	1985-86	1986-87	1987-88
Certificates	5,953	6,160 (3.5%)	6,733 (9.3%)
Farm Fed	9,960	10,717 (7.6%)	11,084 (3.4%)
Both	6,094	8,238 (35.2%)	8,338 (1.2%)
Total	22,007	25,115 (14.1%)	26,155 (4.1%)

NOTE: percentages in parentheses denotes changes from previous year.

The number of registrations received during the 1987-88 fiscal year was less than those received during previous years. The percentage increase in registrations dropped ten percent to 4.1 percent in 1987-88 from 14.1 percent in 1986-87.

The declining trend of new registrations on the program in total was consistent with the number of registrations received under the farm fed and both options. The largest drop occurred in new registrations received under the both option category. This was probably a reflection of the greater complexity of acquiring benefits under this option. The declining trend was reversed under the certificate option. The percentage increase in registrations was greater (9.3%) in 1987-88 than in 1986-87 (3.5%). The simplicity of receiving benefit and the development of procedures within the program to permit issuance of certificates on non-arms-length eligible feed grain transactions was probably the cause.

B. Feed Grain Merchants

Twenty merchants registered on the program during the 1987-88 fiscal year. This brings the total number of merchants registered on the program since its inception to March 31, 1988 to 280. The breakdown of the new merchant registrants was:

Type of Merchant	Number
Grain dealers	8
Feedmills	3
Elevator Companies	-
Exempt*	9
Total	20

Of the 280 merchants, a total of 198 sold grain on the program. These merchants were located from Vancouver to Montreal with the majority in Alberta, Saskatchewan and Manitoba. The distribution of active merchants by type was as follows:

Type of Merchant	Number
Grain dealers	72
Feedmills	65
Elevator Companies	8
Exempt*	53
Total	198

The majority of merchants (69 percent) sold 5,000 tonnes of grain or less on the program during the 1987-88 fiscal year. A complete breakdown of the active merchants by tonnage sold was as follows:

Range of Eligible Grain Sold (tonnes)	Number of Merchants
< 5,000	137
5,001 - 10,000	21
10,001 - 20,000	20
20,001 - 40,000	11
40,001 - 60,000	4
60,001 - 80,000	1
> 80,000	4
Total	198

* Exempt merchants do not buy eligible grain with certificates but receive certificates on the sale of grain/screenings. They are mainly seed cleaning plants.

Effective July 1, 1988, a new program condition 9.8.4 came into effect. This condition allowed elevator companies, feedmills, and licensed grain dealers who had obtained approval from the program administrator to present B certificates which they had issued and cashed to the program for reimbursement. Eleven merchants have obtained approval from the administrator and to date have cashed $1,091,042.91 on behalf of the Alberta Crow Benefit Offset Program.

GRANT PAYMENTS

Grant payments from April 1, 1987 to March 31, 1988 totalled $68,933,426.08 plus accrued liabilities. At the time of writing, the estimated total payout of grant funds was $70,900,756.60. This was down from the previous fiscal year's payments of $73,619,446.00. A complete breakdown of grant payments by region, municipal district and electoral division are given in the appendices. Total grant payments from September 1, 1985 to March 31, 1988 were $175,060,855.08 (excluding accrued liabilities to March 31, 1988).

The monthly payments under the certificate and farm fed option were as shown below:

Month	Certificate Dollar	Farm Fed Dollar	Total Dollar
April	$ 3,098,905.53	$ 22,449.00	$ 3,121,354.53
May	2,640,965.56	2,415,945.00	5,056,910.56
June	4,120,912.52	2,477,559.00	6,598,471.52
July	2,886,562.06	2,869,587.00	5,756,149.06
August	1,572,050.15	2,461,872.00	4,033,922.15
September	2,441,868.17	2,425,542.00	4,867,410.17
October	2,803,055.74	3,629,241.00	6,432,296.74
November	2,475,394.63	5,589,465.00	8,064,859.63
December	2,542,897.87	5,121,102.00	7,663,999.87
January	4,048,140.63	4,365,333.00	8,413,473.63
February	2,533,018.39	1,191,468.00	3,724,486.39
March	2,785,174.83	2,414,917.00	5,200,091.83 1
Total	$33,948,946.08	$34,984,480.00	$68,933,426.08 2

NOTE:
1 Includes some farm fed payments made in April, 1988.
2 Accrued liabilities to March 31, 1988, not included.

The distribution of payments amongst registrants, including those who withdrew or were cancelled from the program during the year, is shown below:

Range of Payments in Dollars			Registrants
$		$ 0.00	7,111
0.01	to	1,000.00	9,223
1,000.01		2,000.00	4,385
2,000.01		3,000.00	2,112
3,000.01		4,000.00	1,269
4,000.01		5,000.00	767
5,000.01		6,000.00	521
6,000.01		7,000.00	366
7,000.01		8,000.00	251
8,000.01		9,000.00	181
9,000.01		10,000.00	160
10,000.01		20,000.00	605
20,000.01		30,000.00	151
30,000.01		40,000.00	85
40,000.01		50,000.00	59
50,000.01 and over			138
Total Number of Registrants			27,384

The majority of registrants 16,334 (59.6%) received $1000.00 or less. A total of 7,111 registrants received no benefit during this fiscal year. Due to the skewed distribution of payments, an average payment per registrant was not calculated, as it could be misleading.

Payments under the certificate and farm fed options for the year were $33,948,946.03 and $34,984,480.00, respectively. Compared to last year, the certificate option payments were down from $46,598,641.00, a decrease of 27.1%. However, the farm fed option payments were up from $27,020,807.00, an increase of 29.5%.

The decrease in total payments in the 1987/88 fiscal year compared to the previous year due to a lower per tonne benefit paid on the ACBOP ($13.00/tonne) as compared to the AFGMAP ($21.00/tonne). The decrease in payments was not as great as expected, due in part to a larger number of livestock, particularly feeder cattle, fed in the province.

Graphs I and II shows the comparison of monthly payments on the two options.

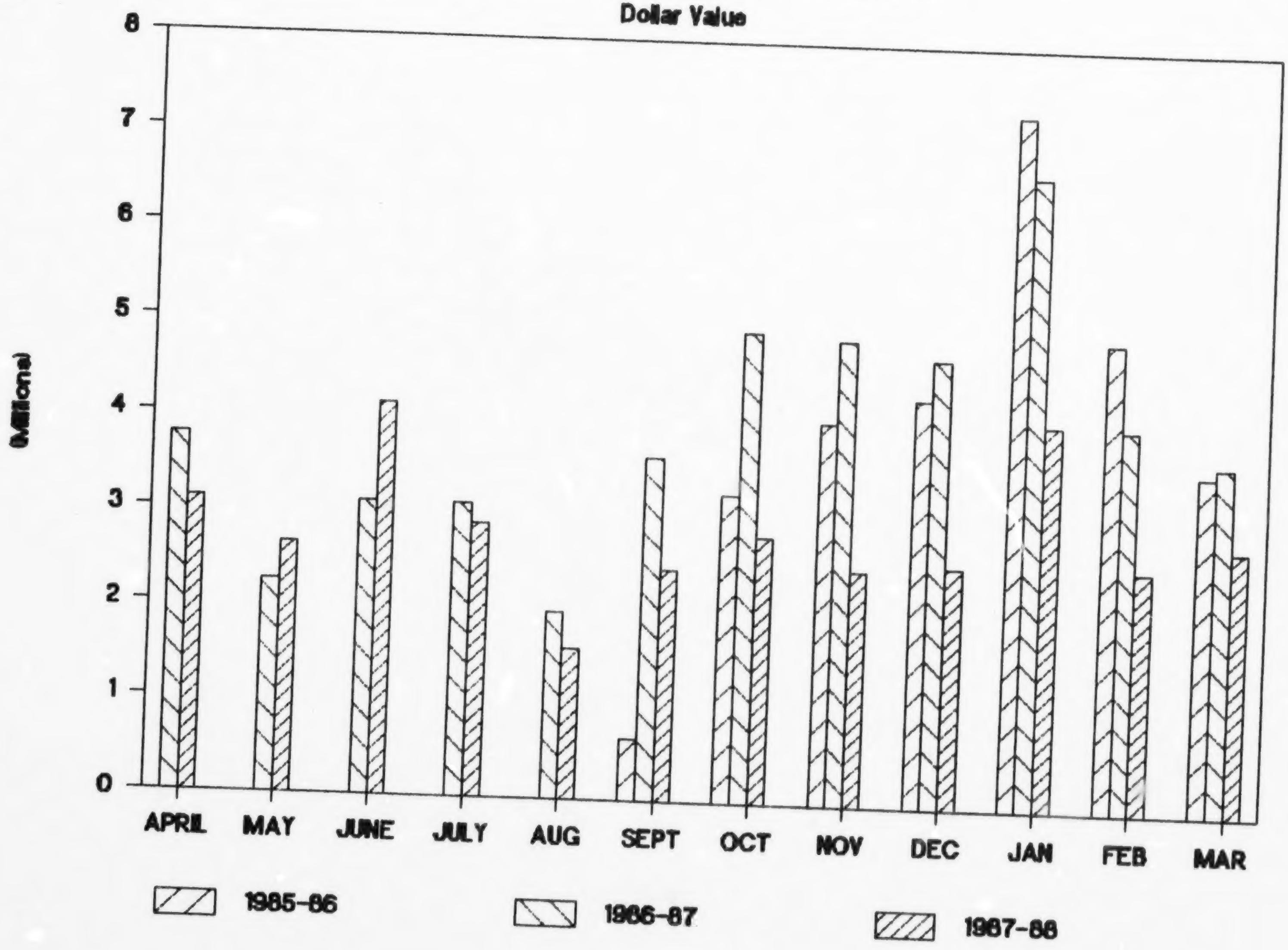
Benefit on the certificate option (Graph I), reflect the $8.00/tonne decrease in per tonne benefit payments under the ACBOP, which began July 1, 1987. In addition, the increased payments in May and June would suggest that either an increase in grain feeding occurred in these months compared to the previous year, or a small amount of stock-piling in response to the per tonne dollar change in benefit, or both.

The distribution of monthly farm-fed payments, as shown in Graph II, were not consistent with what occurred the previous year. There was a 38% increase in the total number of claims processed in the 1987/88 fiscal year - from 19,529 to 26,854. The large apparent volume of claims in the period from November to January was received in response to October 30 deadline for the $21.00 benefit. This increased volume created a delay in the payment of these claims.

The claims processed in the 1987/88 fiscal year were comprised of 24,697 AFGMAP and 2,157 ACBOP claims.

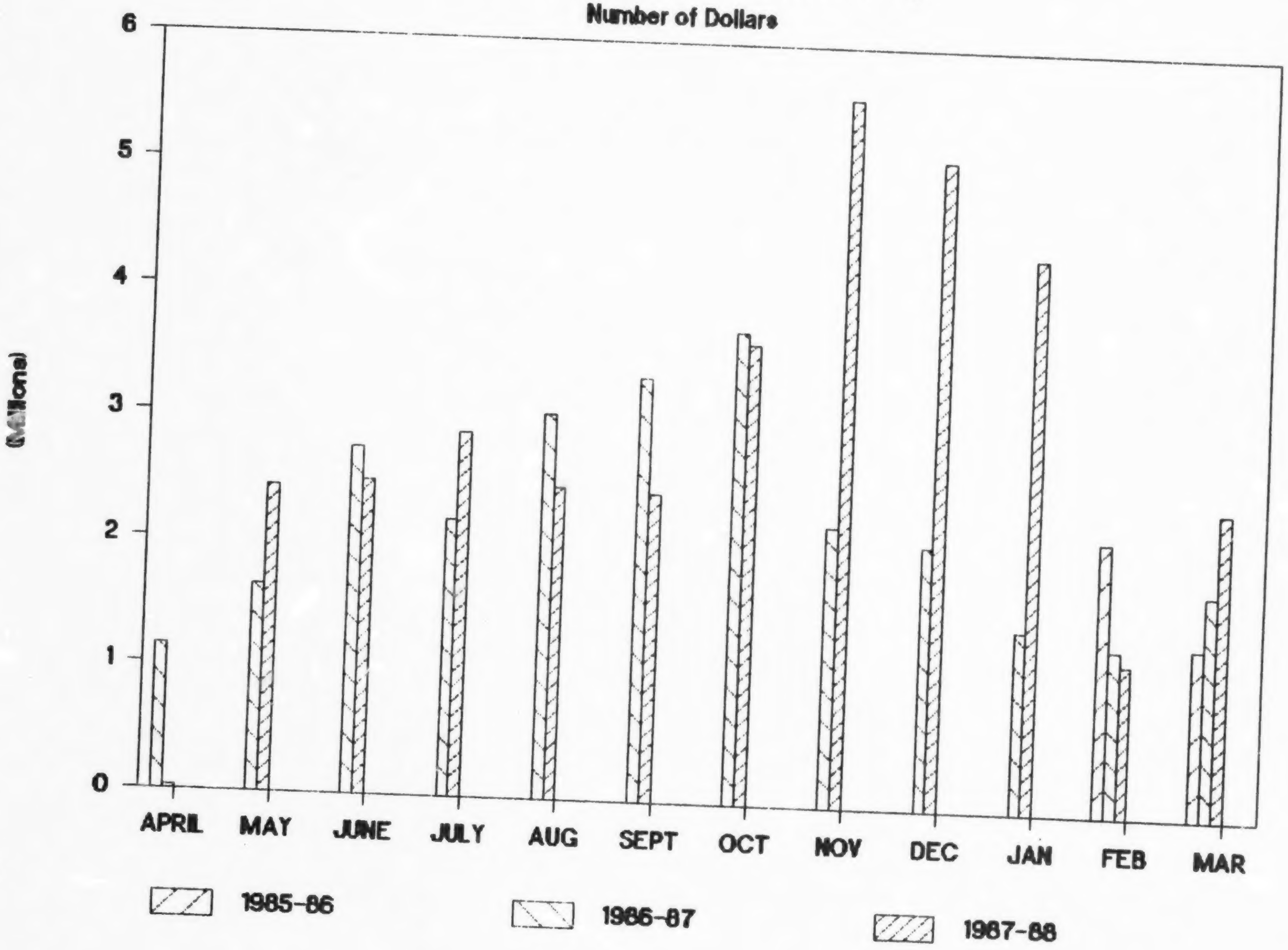
GRAPH I

CERTIFICATE OPTIONS



GRAPH II

FARM FED PAYMENTS



APPENDIX 1

ALBERTA CROW BENEFIT OFFSET PROGRAM
Grant Payment by Region and District Office
1987-1988 fiscal year

Code	Region	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
		52	$ 0.00	$ 11,991.00	$ 11,991.00
1	Lethbridge	3,705	12,951,612.05	4,301,059.00	17,252,671.05
2	Airdrie	3,874	6,329,150.30	4,861,182.00	11,190,332.30
3	Red Deer	6,609	6,240,615.67	9,634,320.00	15,874,935.67
4	Vermilion	5,437	3,117,059.92	7,971,468.00	11,088,527.92
5	Barrhead	5,756	3,295,733.23	6,599,448.00	9,895,181.23
6	Peace River	1,951	553,187.86	1,605,012.00	2,158,199.86
Total:		27,384	$32,487,359.03	$34,984,480.00	$67,471,839.03

LETHBRIDGE REGION (Southern)

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D21BA	Brooks	528	$ 2,684,840.65	$ 524,539.00	$ 3,209,379.65
D21CA	Cardston	339	413,955.52	455,782.00	869,737.52
D21DA	Claresholm	429	1,040,490.11	485,107.00	1,525,597.11
D21EA	Foremost	129	78,660.88	136,063.00	214,723.88
D21EB	Bow Island	81	183,040.35	39,816.00	222,856.35
D21FA	Lethbridge	614	5,596,552.36	762,911.00	6,359,463.36
D21GA	Medicine Hat	461	378,858.79	327,893.00	706,751.79
D21HA	Pincher Creek	247	410,708.38	278,294.00	689,002.38
D21JA	Taber	212	976,597.75	191,710.00	1,168,307.75
D21JB	Vauxhall	176	459,550.36	113,373.00	572,923.36
D21KA	Vulcan	285	145,976.74	458,635.00	604,611.74
D21LA	Warner	204	582,380.16	526,936.00	1,109,316.16
Total:		3,705	$12,951,612.05	$4,301,059.00	$17,252,671.05

AIRDRIE REGION (South Central)

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D22BA	Calgary	388	$ 349,493.19	$ 323,984.00	$ 673,477.19
D22CA	Drumheller	251	110,203.02	528,082.00	638,285.02
D22DA	Hanna	266	115,889.23	233,570.00	349,459.23
D22EA	High River	531	762,068.86	636,132.00	1,398,200.86
D22FA	Olds	1,032	1,335,489.79	1,106,420.00	2,441,909.79
D22GA	Oyen	196	125,046.14	222,447.00	347,493.14
D22HA	Strathmore	357	1,770,413.57	592,560.00	2,362,973.57
D22JA	Three Hills	495	1,068,980.12	771,328.00	1,840,308.12
D22KA	Airdrie	358	691,566.38	446,659.00	1,138,225.38
Total:		3,874	$6,329,150.30	$4,861,182.00	$11,190,332.30

RED DEER REGION (Central)

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D23BA	Camrose	961	$ 591,697.94	$1,247,401.00	$ 1,839,098.94
D23CA	Coronation	480	166,842.34	906,217.00	1,073,059.34
D23DA	Lacombe	753	1,339,473.46	1,397,107.00	2,736,580.46
D23EA	Ponoka	458	1,027,979.20	787,750.00	1,815,729.20
D23FA	Red Deer	489	1,127,682.67	782,098.00	1,909,780.67
D23GA	Rimbey	560	258,462.29	407,072.00	665,534.29
D23HA	Rocky Mtn. House	618	281,183.37	500,930.00	782,113.37
D23JA	Sedgewick	508	300,383.33	863,830.00	1,164,213.33
D23KA	Stettler	630	308,629.85	1,138,924.00	1,447,553.85
D23LA	Wetaskiwin	625	321,198.46	787,763.00	1,108,961.46
D23MA	Innisfail	527	517,082.76	815,228.00	1,332,310.76
Total:		6,609	$6,240,615.67	$9,634,320.00	$15,874,935.67

VERMILION REGION (North East)

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D24BA	Bonnyville	308	$ 68,912.62	$ 327,149.00	$ 396,061.62
D24CA	Lac La Biche	233	15,808.67	220,705.00	236,513.67
D24DA	Lamont	598	106,140.65	578,338.00	684,478.65
D24EA	Lloydminster	333	710,738.46	800,290.00	1,511,028.46
D24FA	Provost	412	822,299.63	973,392.00	1,795,691.63
D24GA	Ryley	650	246,126.75	900,303.00	1,146,429.75
D24HA	St. Paul	708	346,341.85	1,089,240.00	1,435,581.85
D24JA	Smoky Lake	345	55,993.65	389,428.00	445,421.65
D24KA	Two Hills	440	142,189.28	550,341.00	692,530.28
D24LA	Vegreville	604	94,445.98	714,369.00	808,814.98
D24MA	Vermilion	456	137,290.25	774,914.00	912,204.25
D24NA	Wainwright	350	370,772.13	652,999.00	1,023,771.13
Total:		5,437	$3,117,059.92	$7,971,468.00	$11,088,527.92

BARRHEAD REGION (North West)

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D25BA	Athabasca	499	$ 135,564.97	$ 458,992.00	$ 594,556.97
D25CA	Barrhead	710	519,027.54	1,498,793.00	2,017,820.54
D25DA	Drayton Valley	309	54,444.44	187,717.00	242,161.44
D25EA	Edmonton	364	551,257.75	182,613.00	733,870.75
D25FA	Edson	158	173,844.37	127,219.00	301,063.37
D25GA	Evansburg	174	30,083.12	90,794.00	120,877.12
D25HA	Leduc	844	338,584.99	1,020,715.00	1,359,299.99
D25JA	Morinville	416	542,640.13	709,252.00	1,251,892.13
D25KA	Sangudo	569	147,939.07	506,939.00	654,878.07
D25LA	Stony Plain	563	187,276.00	541,934.00	729,210.00
D25MA	Thorhild	386	117,913.09	355,753.00	473,666.09
D25NA	Westlock	764	497,157.76	918,727.00	1,415,884.76
Total:		5,756	$3,295,733.23	$6,599,448.00	$ 9,895,181.23

PEACE REGION

D.A. Code	District	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
D26BA	Fairview	306	$ 88,543.32	$ 209,358.00	$ 297,901.32
D26CA	Fahler	48	31,650.91	64,503.00	96,153.91
D26DA	Fort Vermilion	175	18,793.37	160,973.00	179,766.37
D26EA	Grande Prairie	510	200,475.09	461,277.00	661,752.09
D26FA	High Level	1	0.00	1,848.00	1,848.00
D26GA	High Prairie	174	28,612.02	118,481.00	147,093.02
D26HA	Manning	116	18,175.02	63,908.00	82,083.02
D26JA	Peace River	173	56,826.27	144,638.00	201,464.27
D26LA	Spirit River	220	66,450.27	163,925.00	230,375.27
D26MA	Valleyview	155	32,073.15	154,226.00	186,299.15
D26NA	Eaglesham	73	11,588.44	61,875.00	73,463.44
Total:		1,951	$553,187.86	$1,605,012.00	$2,158,199.86

APPENDIX 2

ALBERTA CROW BENEFIT OFFSET PROGRAM
Grant Payment by Municipal District
1987-1988 fiscal year

M.D. Code	M.D. Name	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
C001	Grande Prairie	448	$ 170,486.67	$ 422,242.00	$ 592,728.67
C002	Vulcan	299	152,931.98	503,456.00	656,387.98
C003	Ponoka	917	1,271,000.01	1,135,374.00	2,406,374.01
C004	Newell	476	2,577,258.99	507,650.00	3,084,908.99
C005	Warner	208	590,677.52	532,522.00	1,123,199.52
C006	Stettler	638	302,366.72	1,165,237.00	1,467,603.72
C007	Thorhild	374	105,309.58	339,185.00	444,494.58
C008	Forty Mile	234	291,510.49	195,210.00	486,720.49
C009	Beaver	669	215,706.73	888,601.00	1,104,307.73
C010	Wetaskiwin	752	348,561.72	828,013.00	1,176,574.72
C011	Barrhead	666	509,897.56	1,455,954.00	1,965,851.56
C012	Athabasca	494	135,603.46	453,161.00	588,764.46
C013	Smoky Lake	372	66,182.02	414,495.00	480,677.02
C014	Lacombe	801	1,342,917.80	1,429,788.00	2,772,705.80
C016	Wheatland	389	1,788,996.98	686,421.00	2,475,417.98
C017	Mountainview	998	1,208,388.98	1,065,556.00	2,273,944.98
C018	Paintearth	285	64,531.93	564,011.00	628,542.93
C019	St. Paul	584	228,989.27	871,408.00	1,100,397.27
C020	Strathcona	364	491,061.76	176,455.00	667,516.76
C021	Two Hills	490	162,666.38	606,902.00	769,568.38
C022	Camrose	881	571,924.16	1,102,450.00	1,674,374.16
C023	Red Deer	977	1,733,475.36	1,564,572.00	3,298,047.36
C024	Vermilion River	760	840,165.17	1,535,629.00	2,375,794.17
C025	Leduc	970	369,741.15	1,089,219.00	1,458,960.15
C026	Lethbridge	593	4,777,621.38	741,991.00	5,519,612.38
C027	Minburn	510	80,822.59	644,530.00	725,352.59
C028	Lac Ste. Anne	623	149,233.69	560,855.00	710,088.69
C029	Flagstaff	555	308,145.14	974,689.00	1,282,834.14
C030	Lamont	670	113,310.03	622,175.00	735,485.03
C031	Parkland	646	208,838.81	594,882.00	803,720.81
ID04	Waterton Park	1	0.00	168.00	168.00
ID05	Kananaskis Park	4	409.18	189.00	598.18
ID06	Canmore S	5	989.74	2,079.00	3,068.74
ID07	Drumheller	5	189.47	735.00	924.47
ID08	Canmore N	20	10,605.97	4,780.00	15,385.97
ID09	Banff Park	1	0.00	819.00	819.00
ID14	Evansburg	305	197,431.34	213,829.00	411,260.34
ID15	Fort Assiniboine	71	10,828.13	32,174.00	43,002.13

Appendix 2 Page 2 Alberta Crow Benefit Offset Program

M.D. Code	M.D. Name	Registration Number	Certificate Dollars	Farm Fed Dollars	Total Dollars
ID16	Valleyview	228	$ 63,600.41	$ 206,609.00	$ 270,209.41
ID17	High Prairie	270	72,383.67	207,388.00	279,771.67
ID18	Bonnyville ID	340	40,129.63	326,694.00	366,823.63
ID19	Wanham	96	23,230.05	76,263.00	99,493.05
ID20	Spirit River ID	166	51,092.58	129,265.00	180,357.58
ID21	Worsley	189	69,924.79	113,451.00	183,375.79
ID22	Manning	162	39,772.98	92,544.00	132,316.98
ID23	Fort Vermilion	173	4,899.53	66,305.00	71,204.53
MD01	Cypress	444	348,540.20	288,822.00	637,362.20
MD06	Cardston	336	416,300.01	451,855.00	868,155.01
MD09	Pincher Creek	247	410,708.38	278,294.00	689,002.38
MD14	Taber	391	1,437,119.29	305,083.00	1,742,202.29
MD26	Willow Creek	443	1,842,662.47	484,918.00	2,327,580.47
MD31	Foothills	514	757,558.71	614,878.00	1,372,436.71
MD34	Acadia Valley	36	37,773.86	61,808.00	99,581.86
MD44	Rocky View	743	1,040,939.30	768,115.00	1,809,054.30
MD47	Starland	189	73,660.71	436,116.00	509,776.71
MD48	Kneehill	529	1,083,512.26	798,667.00	1,882,179.26
MD52	Provost	379	794,212.17	910,035.00	1,704,247.17
MD61	Wainwright	353	366,479.72	699,346.00	1,065,825.72
MD87	Bonnyville MD	290	149,889.69	411,227.00	561,116.69
MD90	Sturgeon	418	550,993.76	718,029.00	1,269,022.76
MD92	Westlock	719	487,654.27	897,073.00	1,384,727.27
MD99	Clearwater	646	380,374.35	501,748.00	882,122.35
MD130	Smoky River	50	32,007.91	59,190.00	91,197.91
MD133	Spirit River MD	40	12,027.74	24,674.00	36,701.74
MD135	Peace	91	17,922.36	71,227.00	89,149.36
MD136	Fairview	107	11,867.29	88,127.00	99,994.29
SA02	Hanna	283	228,688.77	361,273.00	589,961.77
SA03	Oyen	172	109,754.11	139,117.00	248,871.11
SA04	Consort	233	132,900.20	456,942.00	589,842.20
Unidentifiable		52	0.00	11,991.00	11,991.00
Total:		27,384	$32,487,359.03	$34,984,480.00	$67,471,839.03